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<b>14. ABSTRACT</b> Hill Air Force Base (AFB) proposes to construct security facilities to protect Little Mountain Test Annex (LMTA) from unauthorized access and enable guards to intercept contraband (weapons, explosives, drugs, classified material, etc.) while maximizing vehicular traffic flow. The findings of this EA indicate that the proposed action would not have significant adverse effects on the human environment or any of the environmental resources as described in the EA. Therefore, it is concluded that a Finding of No Significant Impact is justified.						
<b>15. SUBJECT TERMS</b> Environmental Assessment Hill Air Force Base						
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## **FINDING OF NO SIGNIFICANT IMPACT**

1. **NAME OF ACTION:** Construct Security Facilities at Little Mountain Test Annex (LMTA), Utah.
2. **DESCRIPTION OF THE PROPOSED ACTION:** Hill Air Force Base (AFB) proposes to provide an entrance facility, a gate house, and a perimeter fence to protect LMTA from unauthorized access and enable guards to intercept contraband (weapons, explosives, drugs, classified material, etc.) while maximizing vehicular traffic flow.
3. **SELECTION CRITERIA:** The following criteria were used to assemble alternatives. The security facilities for LMTA should:
  - protect the installation in a manner compliant with Department of Defense (DOD) unified facilities criteria (UFC);
  - accommodate random antiterrorism measures for sustained operations;
  - be effective at all force protection condition levels including 100 percent vehicle inspections;
  - protect against vehicle-borne threats and illegal entry;
  - protect security guards against attack and errant drivers;
  - maximize the flow of traffic without compromising safety, security, or causing undue delays; and
  - be protective of facilities, human health, and the environment.
4. **ALTERNATIVES CONSIDERED OTHER THAN THE PROPOSED ACTION:**

Under the no action alternative, the security facilities would not be constructed, and force protection deficiencies would continue to exist.

Renovating and expanding the existing entrance facility was eliminated by the Hill AFB planners and engineers. Because the existing entrance facility is not located on the perimeter of the installation, pursuing this alternative would violate the current UFC for force protection.

An alternative to construct the security facilities with a smaller fenced enclosure was considered in detail. This alternative would reduce the length of the security fence and reduce the enclosed acreage, but it would still provide adequate force protection measures.

Other locations were considered by Hill AFB planners and engineers. The entrance facility must be located on the perimeter of the installation, as required by the UFC. The UFC also require a gate house to be located at the edge of a DOD controlled area (the existing LMTA buildings constitute a controlled area). An alternative was considered to fence only the immediate vicinity of the LMTA inner compound and the access road. This alternative did not meet the selection criteria related to force protection requirements specified in the UFC.

## 5. SUMMARY OF ANTICIPATED ENVIRONMENTAL EFFECTS:

Issue	Alternative A No Action	Alternative B Proposed Action	Alternative C Construct Security Facilities With a Smaller Fenced Enclosure
Air Quality	No effects	Construction equipment would create temporary emissions. Fugitive dust emissions would be mitigated.  Air emissions from an emergency generator and an outdoor heater would produce 0.13 tons per year or less of each criteria pollutant, or of hazardous air pollutants as a group.	Construction equipment would create temporary emissions. Fugitive dust emissions would be mitigated.  Air emissions from an emergency generator and an outdoor heater would produce 0.13 tons per year or less of each criteria pollutant, or of hazardous air pollutants as a group.
Solid and Hazardous Waste	No effects	If contaminated soils are identified, they would be properly handled during the construction process. Operational activities would generate uncontaminated trash and domestic sewage. Solid and liquid wastes would all be properly contained, stored, transported, disposed, re-used, and/or recycled. Wastewater would flow to an existing sanitary sewer line.	If contaminated soils are identified, they would be properly handled during the construction process. Operational activities would generate uncontaminated trash and domestic sewage. Solid and liquid wastes would all be properly contained, stored, transported, disposed, re-used, and/or recycled. Wastewater would flow to an existing sanitary sewer line.
Biological Resources	No effects	LMTA habitat has been previously degraded by human activities and by fires. The proposed entrance facility would reduce available forage for birds and mammals, and displace rodents. Without mitigation, construction activities would increase the chance of introducing additional invasive species. Restoration planting (of any areas not occupied by structures or pavements) would include fire resistant plants, native grasses, and native shrubs. The resident mule deer herd would be managed and its population maintained at acceptable levels for the available forage. A fire management plan would improve existing habitat.	LMTA habitat has been previously degraded by human activities and by fires. The proposed entrance facility would reduce available forage for birds and mammals, and displace rodents. Without mitigation, construction activities would increase the chance of introducing additional invasive species. Restoration planting (of any areas not occupied by structures or pavements) would include fire resistant plants, native grasses, and native shrubs. Migration corridors for the resident mule deer herd would be blocked, thus eliminating important habitat areas frequented by the deer, which would likely reduce the population of mule deer in this area of Weber County based on habitat constraints. A fire



			management plan would improve existing habitat.
Water Quality	No effects	During construction and operations, water quality would be protected by implementing stormwater management practices. Predevelopment hydrologic characteristics would be preserved. Contaminated shallow groundwater may exist beneath portions of the proposed perimeter fence. If groundwater or saturated soils were to be contacted in the relevant areas, activities would be halted and Hill AFB remedial managers would be contacted.	During construction and operations, water quality would be protected by implementing stormwater management practices. Predevelopment hydrologic characteristics would be preserved. Contaminated shallow groundwater may exist beneath portions of the proposed fence. If groundwater or saturated soils were to be contacted in the relevant areas, activities would be halted and Hill AFB remedial managers would be contacted.

**6. FINDING OF NO SIGNIFICANT IMPACT:** Based on the above considerations, a Finding of No Significant Impact (FONSI) is appropriate for this assessment.

Approved by:

 FOR  
HARRY BRIESMASTER III, YF-03, DAF  
Director, 75th Civil Engineer Group

Date: 20090709



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Hill Air Force Base, Utah

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*Final*

**Environmental Assessment:  
Proposed Security Facilities,  
Little Mountain Test Annex, Utah**

July 9, 2009

***Final***  
**Environmental Assessment (EA):  
Proposed Security Facilities,  
Little Mountain Test Annex, Utah**

**Contract F42650-03-D-0007, Delivery Order #0033**

**Department of the Air Force  
Air Force Materiel Command  
Hill Air Force Base, Utah 84056**

**July 9, 2009**

**Prepared in accordance with the Department of the Air Force Environmental Impact Analysis Process (EIAP) 32 CFR Part 989, Effective July 6, 1999, which implements the National Environmental Policy Act (NEPA), the President's Council on Environmental Quality (CEQ) regulations.**

## **EXECUTIVE SUMMARY**

### **Purpose and Need**

The purpose of the proposed action is to provide security facilities to protect Little Mountain Test Annex (LMTA) from unauthorized access and enable guards to intercept contraband (weapons, explosives, drugs, classified material, etc.) while maximizing vehicular traffic flow.

The new facilities are needed to replace existing facilities, which do not comply with Department of Defense (DOD) unified facilities criteria (UFC). During security inspections, the existing facilities have been cited for insufficient standoff distances to provide desired levels of protection against terrorist attacks for the occupants of LMTA. Providing new facilities would increase security and bring LMTA security facilities into compliance with UFC.

### **Scope of Review**

During a scoping meeting and subsequent interactions, the following environmental issues were addressed:

- air quality,
- solid and hazardous wastes (including liquid waste streams),
- biological resources,
- geology and surface soils,
- water quality,
- cultural resources,
- occupational safety and health,
- air installation compatible use zone (AICUZ), and
- socioeconomic resources.

As explained in the body of this document, the issues that were identified for detailed consideration are: air quality, solid and hazardous wastes (including liquid waste streams), biological resources, and water quality.

### **Selection Criteria**

The security facilities for LMTA should:

- protect the installation in a manner compliant with UFC;
- accommodate random antiterrorism measures for sustained operations;
- be effective at all force protection condition levels including 100 percent vehicle inspections;
- protect against vehicle-borne threats and illegal entry;
- protect security guards against attack and errant drivers;
- maximize the flow of traffic without compromising safety, security, or causing undue delays; and

- be protective of facilities, human health, and the environment.

### **Alternatives Considered in Detail**

Alternative A (No Action Alternative) - Under the no action alternative, the security facilities would not be constructed, and force protection deficiencies relative to requirements specified in the UFC would continue to exist.

Alternative B (Proposed Action - Construct Security Facilities) - The proposed action would include:

- Constructing an entry facility consisting of the following components:
  - ◆ an inspection area for privately-owned vehicles;
  - ◆ an inspection area for commercial vehicles;
  - ◆ an overwatch area;
  - ◆ a visitors' center;
  - ◆ new asphalt roadways;
  - ◆ utility poles for power, lighting, and security cameras;
  - ◆ a generator for emergency backup power; and
  - ◆ a heater for outdoor use during cold-weather months.
- Constructing a gate house at the edge of the controlled area.
- Providing connections to existing buried utilities consisting of water, electricity, telephone/data, sanitary sewer, and storm drains.
- Installing a perimeter fence.

Alternative C (Construct Security Facilities With a Smaller Fenced Enclosure) - This alternative would reduce the length of the security fence and reduce the enclosed acreage, but it would still enclose the high terrain surrounding the inner compound, thus meeting the selection criteria related to force protection.

### **Decisions That Must Be Made**

Hill AFB must decide whether to:

- not provide new security facilities at LMTA (no action), or
- construct new security facilities at LMTA.
- If the decision is to construct new security facilities at LMTA, then a decision must be made as to where the facilities will be located.

If Hill AFB decides to construct the security facilities, the proponent and environmental managers would comply with the mitigation measures as indicated in this environmental assessment. Further, within 90 days of a written decision pursuant to this environmental assessment, the proponent and environmental managers would then decide what



additional mitigation and/or monitoring plans and measures, if any, should be implemented.

### Results of the Environmental Assessment

Alternatives A, B, and C were considered in detail. The results of the environmental assessment are summarized in the following table.

Summary Comparison of Alternatives

Issue	Alternative A No Action	Alternative B Proposed Action	Alternative C Construct Security Facilities With a Smaller Fenced Enclosure
Air Quality	No effects	Construction equipment would create temporary emissions. Fugitive dust emissions would be mitigated.  Air emissions from an emergency generator and an outdoor heater would produce 0.13 tons per year or less of each criteria pollutant, or of hazardous air pollutants as a group.	Construction equipment would create temporary emissions. Fugitive dust emissions would be mitigated.  Air emissions from an emergency generator and an outdoor heater would produce 0.13 tons per year or less of each criteria pollutant, or of hazardous air pollutants as a group.
Solid and Hazardous Waste	No effects	If contaminated soils are identified, they would be properly handled during the construction process. Operational activities would generate uncontaminated trash and domestic sewage. Solid and liquid wastes would all be properly contained, stored, transported, disposed, re-used, and/or recycled. Wastewater would flow to an existing sanitary sewer line.	If contaminated soils are identified, they would be properly handled during the construction process. Operational activities would generate uncontaminated trash and domestic sewage. Solid and liquid wastes would all be properly contained, stored, transported, disposed, re-used, and/or recycled. Wastewater would flow to an existing sanitary sewer line.
Biological Resources	No effects	LMTA habitat has been previously degraded by human activities and by fires. The proposed entrance facility would reduce available forage for birds and mammals, and displace rodents. Without mitigation, construction activities would increase the chance of introducing additional invasive species. Restoration planting (of any areas not occupied by structures or pavements) would include fire resistant plants, native grasses, and	LMTA habitat has been previously degraded by human activities and by fires. The proposed entrance facility would reduce available forage for birds and mammals, and displace rodents. Without mitigation, construction activities would increase the chance of introducing additional invasive species. Restoration planting (of any areas not occupied by structures or pavements) would include fire resistant plants, native grasses, and

		native shrubs. The resident mule deer herd would be managed and its population maintained at acceptable levels for the available forage. A fire management plan would improve existing habitat.	native shrubs. Migration corridors for the resident mule deer herd would be blocked, thus eliminating important habitat areas frequented by the deer, which would likely reduce the population of mule deer in this area of Weber County based on habitat constraints. A fire management plan would improve existing habitat.
Water Quality	No effects	During construction and operations, water quality would be protected by implementing stormwater management practices. Predevelopment hydrologic characteristics would be preserved. Contaminated shallow groundwater may exist beneath portions of the proposed perimeter fence. If groundwater or saturated soils were to be contacted in the relevant areas, activities would be halted and Hill AFB remedial managers would be contacted.	During construction and operations, water quality would be protected by implementing stormwater management practices. Predevelopment hydrologic characteristics would be preserved. Contaminated shallow groundwater may exist beneath portions of the proposed fence. If groundwater or saturated soils were to be contacted in the relevant areas, activities would be halted and Hill AFB remedial managers would be contacted.

### Identification of the Preferred Alternative

Hill AFB prefers Alternative B (the proposed action).

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## LIST OF ACRONYMS AND CHEMICAL TERMS

AFB	Air Force Base
AFOSH	Air Force Occupational Safety and Health
AICUZ	Air Installation Compatible Use Zone
APE	Area of Potential Effect
CAA	Clean Air Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CWA	Clean Water Act
DAQ	Division of Air Quality (Utah)
DOD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
DWR	Division of Wildlife Resources (Utah)
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EISA	Energy Independence and Security Act
EPA	Environmental Protection Agency (United States)
FONSI	Finding of No Significant Impact
FPCONS	Force Protection Condition Levels
FQD	Floristic Quality Index
HAP	Hazardous Air Pollutant
IRP	Installation Restoration Program
LMTA	Little Mountain Test Annex
MBTA	Migratory Bird Treaty Act
MILCON	Military Construction
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO <sub>x</sub>	Oxides of Nitrogen
O <sub>3</sub>	Ozone

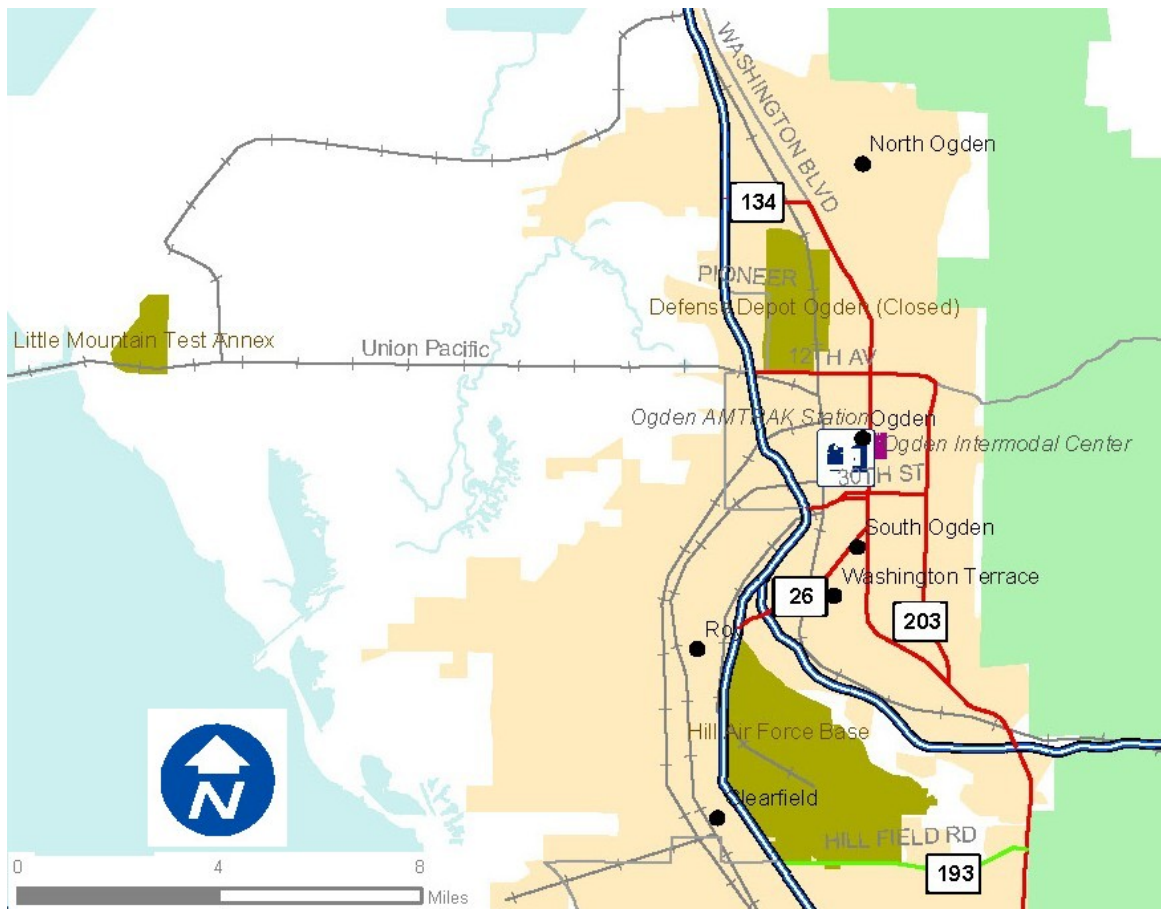


OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyl
PM-10	Particulates Smaller Than 10 Microns in Diameter
PM-2.5	Particulates Smaller Than 2.5 Microns in Diameter
RAM	Random Antiterrorism Measures
RCRA	Resource Conservation and Recovery Act
RHI	Range Health Index
ROD	Record of Decision
SHPO	State Historic Preservation Office
SIP	State Implementation Plan
SO <sub>2</sub>	Sulfur Dioxide
SOC	Species of Concern
SO <sub>x</sub>	Oxides of Sulfur
SWPPP	Stormwater Pollution Prevention Plan
UAC	Utah Administrative Code
UFC	Unified Facilities Criteria
UGS	Utah Geological Survey
USAF	United States Air Force
USC	United States Code
VOC	Volatile Organic Compound
WCI	Wildlife Community Index

# 1 PURPOSE OF AND NEED FOR ACTION

## 1.1 Introduction

Hill Air Force Base (AFB) is located approximately seven miles south of downtown Ogden, Utah (Figure 1). The base lies primarily in northern Davis County with a small portion located in southern Weber County. Little Mountain Test Annex (LMTA) is a 740 acre facility managed by Hill AFB, located approximately 15 miles west of Ogden, Utah, (Weber County) on the eastern shore of the Great Salt Lake (Figure 1). Research and development activities associated with rocket motor propellants are conducted at LMTA.



**Figure 1: Location of Hill AFB and LMTA**

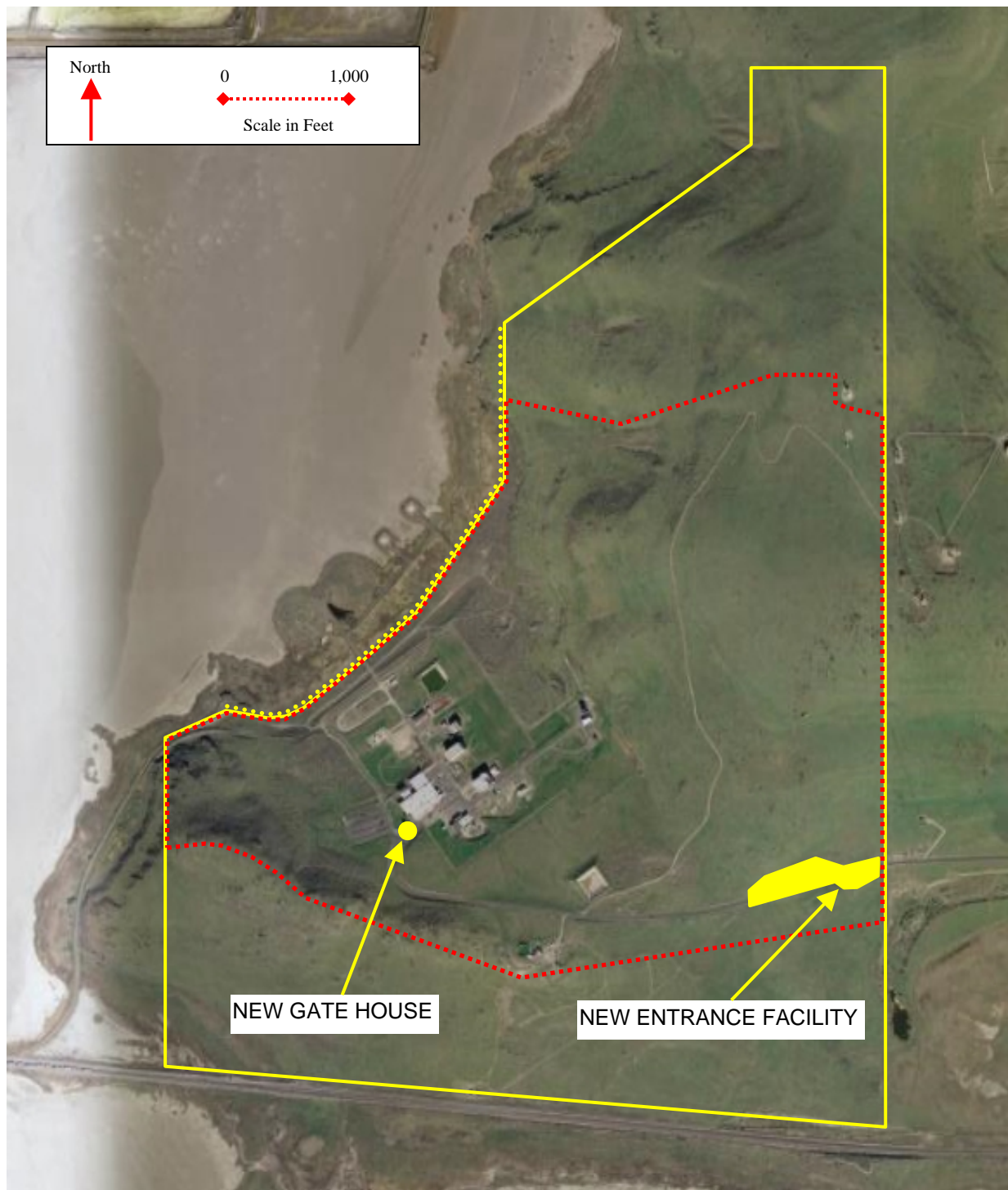
## 1.2 Purpose of the Action

The purpose of the proposed action is to provide security facilities to protect LMTA from unauthorized access and enable guards to intercept contraband (weapons, explosives, drugs, classified material, etc.) while maximizing vehicular traffic flow. The security facilities (see Figure 2) would include:

- an entrance facility,
- a gate house, and
- a perimeter fence.

### **1.3 Need for the Action**

The new facilities are needed to replace existing facilities, which do not comply with Department of Defense (DOD) unified facilities criteria (UFC [DOD 2005]). During security inspections, the existing facilities have been cited for insufficient standoff distances to provide desired levels of protection against terrorist attacks for the occupants of LMTA. Providing new facilities would increase security and bring LMTA security facilities into compliance with UFC.



Yellow lines are the proposed perimeter fence (Alternative B), dashed for new, solid for replace existing. Dashed red line is the approximate location of the security fence for Alternative C.

**Figure 2: Location of Proposed Facilities**

## **1.4 Alternative Selection Criteria**

Due to the considerations presented in the preceding sections, the following selection criteria were established. The security facilities for LMTA should:

- protect the installation in a manner compliant with UFC;
- accommodate random antiterrorism measures (RAM) for sustained operations;
- be effective at all force protection condition levels (FPCONs) including 100 percent vehicle inspections;
- protect against vehicle-borne threats and illegal entry;
- protect security guards against attack and errant drivers;
- maximize the flow of traffic without compromising safety, security, or causing undue delays; and
- be protective of facilities, human health, and the environment.

## **1.5 Relevant Plans, EISs, EAs, Laws, Regulations, and Other Documents**

During the scoping process, one relevant plan was identified: a proposal by Hill AFB to construct a fire department facility at LMTA. The proposed fire department will be addressed in subsequent environmental documents by Hill AFB. No other relevant plans, environmental impact statements (EISs), or EAs were identified.

The following federal, state, and local laws and regulations would apply to the proposed action:

- *UFC Security Engineering: Entry Control Facilities / Access Control Points*, Department of Defense, May, 2005.
- The National Environmental Policy Act (NEPA), Title 42 of the United States Code (USC) Section 4321 *et seq.*
- Council on Environmental Quality regulations, Title 40 of the Code of Federal Regulations (CFR) Parts 1500-1508.
- United States Air Force (USAF)-specific requirements contained in 32 CFR Part 989, Environmental Impact Analysis Process (EIAP).
- Safety guidelines of the Occupational Safety and Health Administration (OSHA).
- Relevant Air Force Occupational Safety and Health (AFOSH) standards.
- Utah's fugitive emissions and fugitive dust rules (Utah Administrative Code [UAC] Section R307-309).

- Utah’s State Implementation Plan (UAC Section R307-110), which complies with the General Conformity Rule of the Clean Air Act (CAA), Section 176 (c).
- Determining Conformity of Federal Actions to State or Federal Implementation Plans, 40 CFR Part 93.154.
- US Air Force *Conformity Guide*, 1995.
- Utah Asbestos Rules, UAC, Section R307-801.
- The Resource Conservation and Recovery Act (RCRA), 42 USC Chapter 82, and regulations promulgated thereunder, 40 CFR Part 260 *et seq.*
- Federal facility agreement dated April 10, 1991 under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 42 USC Section 9601 *et seq.*
- Utah hazardous waste management regulations contained in UAC Section R315, and the Hill AFB *Hazardous Waste Management Plan* dated May, 2001, and subsequent versions.
- The Clean Water Act (CWA), 33 USC Section 1251 *et seq.*
- The Energy Independence and Security Act (EISA) of 2007, Sec. 438, Storm Water Runoff Requirements for Federal Development Projects, *et seq.*
- The Hill AFB *Stormwater Management Plan - Municipal Stormwater Permit*, dated April, 2007, and subsequent versions.
- Migratory Bird Treaty Act (MBTA), 16 USC Sections 703-712 *et seq.*
- Bald and Golden Eagle Protection Act, 16 USC Sections 668-668c *et seq.*
- The Hill AFB *Integrated Natural Resources Management Plan*, dated 2006, and subsequent versions.
- The Hill AFB *Integrated Cultural Resources Management Plan*, dated January, 2007, and subsequent versions.
- The National Historic Preservation Act (NHPA), 16 USC Section 470 *et seq.*

During the scoping process, no other documents were identified as being relevant to the proposed action.

## 1.6 Decisions That Must Be Made

Hill AFB must decide whether to:

- not provide new security facilities at LMTA (no action), or



- construct new security facilities at LMTA.
- If the decision is to construct new security facilities at LMTA, then a decision must be made as to where the facilities will be located.

Renovating and expanding the existing entrance facility was eliminated by the Hill AFB planners and engineers. Because the existing entrance facility is not located on the perimeter of the installation, pursuing this alternative would violate the current UFC for force protection.

If Hill AFB decides to construct new security facilities at LMTA, the proponent and environmental managers would comply with the mitigation measures as indicated in this environmental assessment. Further, within 90 days of a written decision pursuant to this environmental assessment, the proponent and environmental managers would then decide what additional mitigation and/or monitoring plans and measures, if any, should be implemented.

If Hill AFB decides to construct new security facilities at LMTA, the base would then decide if the selected alternative would or would not be a major federal action significantly affecting the quality of the human environment. If judged as not significantly affecting the quality of the human environment, then a finding of no significant impact (FONSI) would be prepared and signed, and the project would proceed. If judged as significantly affecting the quality of the human environment, then an EIS and a record of decision (ROD) would have to be prepared and signed before the project could proceed.

## **1.7 Scope of this Environmental Analysis**

The scope of the current environmental analysis is to explore environmental issues related to the proposed action (construct new security facilities at LMTA) and the reasonable alternatives identified within this document.

### **1.7.1 History of the Planning and Scoping Process**

Scoping discussions were held: to identify potential environmental concerns; to facilitate an efficient environmental analysis process; to identify issues and alternatives that would be considered in detail while devoting less attention and time to less important issues; and to save time in the overall process by helping to ensure that draft documents would adequately address relevant issues, thereby reducing the time required to proceed to a final document.

On January 14, 2009, an initial scoping meeting was conducted in Building 5, Hill AFB. Attendees included proponents of the proposed action, managers of Hill AFB's NEPA program, other environmental program managers, and the authors of this document.

During this meeting and subsequent scoping interaction, the following environmental issues were addressed:

- air quality;
- solid and hazardous wastes (including liquid waste streams);

- biological resources;
- geology and surface soils;
- water quality;
- cultural resources;
- occupational safety and health;
- air installation compatible use zone (AICUZ); and
- socioeconomic resources.

### 1.7.2 Issues Studied in Detail

The issues that have been identified for detailed consideration and are therefore presented in Sections 3 and 4 are:

- **Air Quality** (attainment status, emissions, Utah's state implementation plan [SIP])

Air emissions would be produced by construction equipment. Operating the proposed action would create air emissions. Air quality effects are discussed in Section 4 of this document.

- **Solid and Hazardous Wastes** (materials to be used, stored, recycled, or disposed, including liquid waste streams; existing asbestos, lead-based paint, mercury, and polychlorinated biphenyls [PCBs])

During construction, solid wastes would be generated, and other hazardous wastes might be generated that would require proper treatment and/or disposal. Additional hazardous wastes could be generated if a spill of fuel, lubricants, or construction-related chemicals were to occur.

Operating the proposed action would be expected to create solid and hazardous wastes (to include solid and liquid wastes). Effects related to solid and hazardous wastes are discussed in Section 4 of this document.

- **Biological Resources** (flora and fauna including threatened, endangered, and sensitive species; wetlands; floodplains)

Approximately 5.6 acres of undeveloped land would be disturbed by the proposed entrance facility. The perimeter fence would enclose a resident mule deer herd. Effects related to biological resources are discussed in Section 4 of this document.

- **Water Quality** (surface water, groundwater, water quantity, wellhead protection zones)

Based on Hill AFB estimates, the land area to be disturbed by the entrance facility would be approximately 5.6 acres in size. The proposed action would be subject to stormwater permit requirements both during the construction period and during operations.

Contamination of shallow groundwater may exist beneath portions of the proposed perimeter fence and utility poles that would serve the entrance facility. Potential contact with contaminated shallow groundwater by auger crews is addressed in Section 4 of this document.

The scoping discussions did not identify any issues related to quantity of water or wellhead protection zones.

Effects related to water quality are discussed in Section 4 of this document.

Liquid waste streams created during construction and from operating the proposed action are included in the discussions related to solid and hazardous wastes (Section 4 of this document).

#### 1.7.3 Issues Eliminated From Further Study

The issues that were not carried forward for detailed consideration in Sections 3 and 4 are:

- **Geology and Surface Soils** (seismicity, topography, minerals, geothermal resources, land disturbance, known pre-existing contamination)

The scoping discussions did not identify any issues related to seismicity, topography, minerals, or geothermal resources.

Excavations would be necessary to install: footings; foundations; and buried utilities consisting of water, electricity, telephone/data, sanitary sewer, and storm drains. Discussions related to preventing soil erosion (stormwater pollution prevention) are addressed under water quality effects (Section 4 of this document).

Contamination of shallow soil is not known to exist in the vicinity of the proposed action. Potential discovery of suspicious soils during excavation is addressed under solid and hazardous wastes (Section 4 of this document).

- **Cultural Resources** (archaeological, architectural, traditional cultural properties)

Four previous inventories have comprised cultural resources surveys of 848 acres at LMTA (the 731 acres owned by Hill AFB and additional acres occupied by easement). No cultural resources were identified. The current project alternatives fall within these previously inventoried areas. Given the lack of previous findings

and the extensive development and disturbance of LMTA, the potential for historic properties is extremely low. However, if any are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and unanticipated discovery of archaeological deposits procedures will be implemented with direction from the Hill AFB Cultural Resources Program in accordance with Standard Operating Procedure 5 in the Hill AFB *Integrated Cultural Resources Management Plan* (Hill 2007a). The Utah State Historic Preservation Office (SHPO) concurred with a finding of no adverse effect after reviewing the proposed action (Appendix A). Hill AFB initiated a formal consultation process with 17 American Indian Tribes regarding the proposed action. Two responses, neither with any objections noted, were received (Appendix B).

- **Occupational Safety and Health** (physical and chemical hazards, radiation, explosives, bird and wildlife hazards to aircraft)

Throughout the construction phase of the project, Hill AFB contractors would follow OSHA safety guidelines as presented in the CFR. Hazardous materials that could be used during construction are included in the discussions related to solid and hazardous wastes (Section 4 of this document).

Related to Hill AFB military personnel and civilian employees, the Bio-environmental Engineering Flight (75 AMDS/SGPB) is responsible for implementing AFOSH standards. The AFOSH program addresses (partial list): hazard abatement, hazard communication, training, personal protective equipment and other controls to ensure that occupational exposures to hazardous agents do not adversely affect health and safety, and acquisition of new systems.

The scoping discussions did not identify any issues related to occupational safety and health that would not be routinely addressed by OSHA rules and/or the Bio-engineering Flight.

- **AICUZ** (noise, accident potential, airfield encroachment)

The scoping discussions did not identify any issues related to noise, aircraft accident potential, or airfield encroachment.

- **Socioeconomic Resources** (local fiscal effects including employment, population projections, and schools)

Opportunities would exist for local construction workers if the proposed action is constructed. The proposed action would not be expected to create additional permanent jobs at Hill AFB. The scoping discussions did not identify any issues related to population projections or schools.

## **1.8 Applicable Permits, Licenses, and Other Coordination Requirements**

Obtaining, modifying, and/or complying with the following permits would be required to implement the proposed action.

- The Hill AFB Title V Operating Permit (Permit Number: 1100007001, and subsequent versions).
- Storm Water General Permit for Construction Activities permit number UTR300000, dated July 1, 2008, and subsequent versions.
- The Hill AFB *Stormwater Management Plan - Municipal Stormwater Permit*, dated April, 2007, and subsequent versions.

The proponents would coordinate with the Hill AFB hazardous materials program manager (75 CEG/CEVC) to discuss hazardous materials brought on base to construct the proposed action.

## **2.0 ALTERNATIVES, INCLUDING THE PROPOSED ACTION**

### **2.1 Introduction**

This section discusses the process used to develop the alternatives, describes the alternatives, and compares (in a brief summary fashion) the alternatives and their expected effects. Finally, this section states the Air Force's preferred alternative.

### **2.2 Process Used to Develop the Alternatives**

As discussed in Sections 1.3 and 1.4 of this document, Hill AFB intends to provide security facilities consisting of an entrance facility, a gate house, and a perimeter fence. The proposed facilities described in this document would comply with all relevant design standards and DOD security requirements as specified in the UFC.

Hill AFB planners and engineers investigated renovating and expanding the existing entrance facility (see Section 2.3.3.1), and other potential locations for siting the proposed security facilities (see Section 2.3.3.2).

### **2.3 Description of Alternatives**

#### **2.3.1 Alternative A: No Action**

Under the no action alternative, the security facilities would not be constructed, and force protection deficiencies relative to requirements specified in the UFC would continue to exist.

#### **2.3.2 Alternative B: Proposed Action - Construct Security Facilities**

The proposed action is to construct new security facilities at LMTA (Figure 2). The proposed action would consist of:

- Constructing an entry facility consisting of the following components:
  - ◆ an inspection area for privately-owned vehicles;
  - ◆ an inspection area for commercial vehicles;
  - ◆ an overwatch area;
  - ◆ a visitors' center;
  - ◆ new asphalt roadways;
  - ◆ utility poles for power, lighting, and security cameras;
  - ◆ a generator for emergency backup power; and
  - ◆ a heater for outdoor use during cold-weather months.
- Constructing a gate house at the edge of the controlled area.
- Providing connections to existing buried utilities consisting of water, electricity, telephone/data, sanitary sewer, and storm drains.



- Installing a perimeter fence. The northwest portion of the fence would be newly placed. The remainder of the fence would replace an existing, but substandard fence.

### 2.3.3 Alternative C: Construct Security Facilities With a Smaller Fenced Enclosure

The only difference between Alternative C and the proposed action is a smaller area would be enclosed by the security fence (Figure 2). This alternative would reduce the length of the security fence and reduce the enclosed acreage, but it would still enclose the high terrain surrounding the inner compound, thus meeting the selection criteria related to force protection.

### 2.3.3 Alternatives Eliminated From Detailed Study

#### 2.3.3.1 Renovating and Expanding

Renovating and expanding the existing entrance facility was eliminated by the Hill AFB planners and engineers. Because the existing entrance facility is not located on the perimeter of the installation, pursuing this alternative would violate the current UFC for force protection.

#### 2.3.3.2 Other Locations

If an alternative to construct new security facilities is implemented, the entrance facility must be located on the perimeter of the installation, as required by the UFC. The UFC also require a gate house to be located at the edge of a DOD controlled area (the existing LMTA buildings constitute a controlled area). When Hill AFB planners and engineers considered potential locations for the security facilities (entrance facility, gate house, security fence), alignment of the existing access roads combined with the UFC for force protection precluded consideration of alternative locations for the entrance facility and the gate house. It was not considered reasonable to consider alternatives involving abandonment of existing roads, construction of new roads, and working with Weber County officials to re-route vehicular access provided by existing 900 South Street.

Related to the alignment of the security fence, the prime consideration for installing this fence would be to prevent, or make more challenging, the opportunity for an adversary to conduct surveillance or test security by approaching the inner compound at LMTA. The fence would need to be installed in key terrain, enclosing high terrain surrounding the inner compound, and preferably at the LMTA perimeter. The undeveloped areas within LMTA are fairly uniform in their environmental characteristics, which means evaluating any fence location would be expected to yield similar results. More important, however, is the consideration that the security fence should enclose an area that provides the required level of security without creating significant effects to the resident mule deer herd (discussed in Section 4.2.3.2 of this document).

An alternative was considered to fence only the immediate vicinity of the LMTA inner compound and the access road. This alternative did not meet the selection criteria related to force protection requirements specified in the UFC.

## **2.4 Summary Comparison of the Alternatives, the Predicted Achievement of the Project Objectives and the Predicted Environmental Effects of All Alternatives**

### **2.4.1 Summary Comparison of Project Alternatives**

The no action alternative would be to continue current operations using the existing facilities. Force protection deficiencies relative to requirements specified in the UFC would continue to exist.

Under either Alternative B (proposed action) or Alternative C, new security facilities would be constructed, enabling Hill AFB to comply with all relevant design standards and DOD security requirements as specified in the UFC.

### **2.4.2 Summary Comparison of Predicted Achievement of Project Objectives**

Description of the Project Objective	Alternative A (No Action)	Alternative B (Proposed Action)	Alternative C (Smaller Fenced Enclosure)
Protect the installation in a manner compliant with UFC	No	Yes	Yes
Accommodate RAM for sustained operations	No	Yes	Yes
Be effective at all FPCONs including 100 percent vehicle inspections	No	Yes	Yes
Protect against vehicle-borne threats and illegal entry	No	Yes	Yes
Protect security guards against attack and errant drivers	No	Yes	Yes
Maximize the flow of traffic without compromising safety, security, or causing undue delays	No	Yes	Yes
Be protective of facilities, human health, and the environment	No	Yes	No

**Table 1: Summary Comparison of Predicted Achievement of Project Objectives**

## **2.5 Identification of the Preferred Alternative**

Hill AFB prefers Alternative B (the proposed action).

## **3.0 AFFECTED ENVIRONMENT**

### **3.1 Introduction**

Section 3 of this document discusses the existing conditions of the potentially affected environment, establishing a resource baseline against which the effects of the various alternatives can be evaluated. It presents relevant facilities and operations, environmental issues, pre-existing environmental factors, and existing cumulative effects due to human activities in the vicinity of the proposed action or the alternative locations.

Issues discussed during scoping meetings, but eliminated from detailed consideration (see Section 1.7.3) include:

- geology and surface soils (seismicity, topography, minerals, geothermal resources, land disturbance, known pre-existing contamination);
- cultural resources (archaeological, architectural, traditional cultural properties);
- occupational safety and health (physical and chemical hazards, radiation, explosives, bird and wildlife hazards to aircraft);
- AICUZ (noise, accident potential, airfield encroachment); and
- socioeconomic resources (local fiscal effects including employment, population projections, and schools).

### **3.2 Description of Relevant Facilities and Operations**

The existing security facilities do not comply with force protection requirements specified in the UFC. No other relevant facilities or operations were identified.

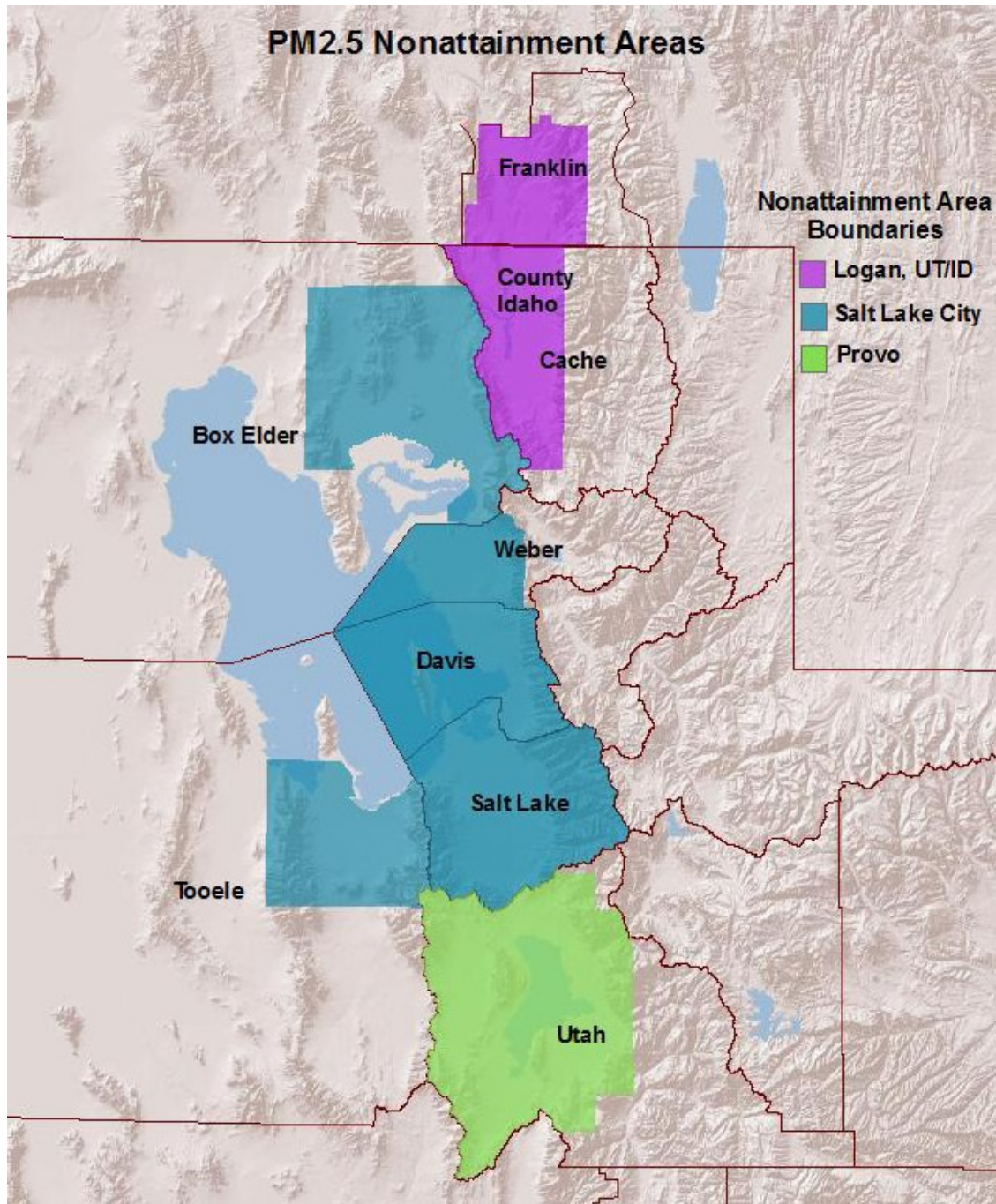
### **3.3 Description of Relevant Affected Issues**

#### **3.3.1 Air Quality**

LMTA is located in Weber County, Utah. Weber County is not in complete attainment status with federal clean air standards (Figure 3).

Non-attainment areas fail to meet national ambient air quality standards (NAAQS) for one or more of the criteria pollutants: oxides of nitrogen (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), ozone (O<sub>3</sub>), particulates less than 10 microns in diameter (PM-10), particulates less than 2.5 microns in diameter (PM-2.5), carbon monoxide (CO), and lead. Weber County (the county in which the proposed action lies) is currently awaiting non-attainment designations for ozone and for PM-2.5. Due to the ozone designation, emission offsets are required for new sources emitting NO<sub>x</sub> and volatile organic compounds (VOCs), which are precursors to ozone formation. Due to the PM-2.5 designation, Utah's Division of Air Quality (DAQ) must submit an implementation plan

to the United States Environmental Protection Agency (EPA) for reducing concentrations of the five main types of pollutants contributing to fine particle concentrations in the non-attainment areas (the pollutants are direct PM-2.5 emissions, SO<sub>2</sub>, NO<sub>x</sub>, ammonia, and VOCs).



**Figure 3: Areas of Non-Attainment for PM-2.5**

The current air quality trend at Hill AFB is one of controlling emissions as Hill AFB managers implement programs to eliminate ozone-depleting substances, limit use of VOCs, switch to lower vapor pressure solvents and aircraft fuel, convert internal combustion engines from gasoline and diesel to natural gas, and improve the capture of particulates during painting and abrasive blasting operations (in compliance with the base's Title V air quality permit).

Published emission estimates are available for criteria air pollutants and hazardous air pollutants (HAPs) for Hill AFB (Hill 2009), and criteria air pollutants for Davis and Weber Counties (DAQ 2009b). The estimates, shown below in Table 2 were based on data from calendar year 2007 for Hill AFB, and for calendar year 2005 for Davis and Weber Counties.

Location	VOC	CO	NO <sub>x</sub>	PM-10	HAP	SO <sub>x</sub>
Hill AFB	278	225	244	41	41	7
Davis County	16,958	63,439	10,720	3,641	not reported	3,480
Weber County	14,796	47,956	6,868	2,882	not reported	238

**Table 2: Baseline Criteria Pollutants and HAPs (tons/year)**

### 3.3.2 Solid and Hazardous Wastes

In general, hazardous wastes include substances that, because of their concentration, physical, chemical, or other characteristics, may present substantial danger to public health or welfare or to the environment when released into the environment or otherwise improperly managed.

Potentially hazardous and hazardous wastes generated at Hill AFB are managed as specified in the *Hill AFB Hazardous Waste Management Plan* with oversight by personnel from the Environmental Management Division and the Defense Reutilization and Marketing Office (DRMO). Hazardous wastes at Hill AFB are properly stored during characterization, and then manifested and transported off site for treatment and/or disposal.

Wastes created within the existing security facilities are limited to uncontaminated office trash and domestic sewage. LMTA facilities are connected to an existing sanitary sewer line.

### 3.3.3 Biological Resources

No federal or state endangered or threatened species are known to occur on properties managed by Hill AFB (Hill 2007b) and no likely habitat for any such species would be disturbed by the proposed action. Wildlife species that are federally listed, candidates for federal listing, or for which a conservation agreement is in place automatically qualify for the Utah sensitive species list. The additional species on the Utah sensitive species list, "wildlife species of concern (SOC)," are those species for which there is credible scientific evidence to substantiate a threat to continued population viability. The mule deer (*Odocoileus hemionus*) present on LMTA are a Utah SOC, as mule deer are linked to an at-risk habitat and are on the decline in much of their current range. There are no wetlands or floodplains affected by the alternatives discussed in this document.

The habitat for the proposed action consists of sagebrush/rabbit brush located on both sloping and flat land that frequently occurs within the Great Basin land form and along the foothills of the Wasatch Mountains. The dominant vegetation consists of Cheatgrass (*Bromus tectorum*), Rabbitbrush (*Chrysothamnus nauseosus*), and Big Sagebrush (*Artemisia tridentata*).

LMTA and surrounding non-Air Force lands comprise 1,250 acres of mule deer habitat, currently supporting a herd of approximately 150 mule deer. The Air Force owns 731 acres (LMTA) of this available habitat. This herd is important in many respects. The Little Mountain area is isolated from other mule deer habitat, and it provides all of the necessary life requirements for these mule deer. Air Force property on Little Mountain supplies all of the life cycle requirements for mule deer except a consistent source of water. Several species of small mammals also occupy LMTA. Approximately 32 species of birds have been observed (see Table 3 below).

Common Name	Scientific Name	Status	Abundance	Reference
Mallard	Anas platyrhynchos	S	C	†
California gull	Larus californicus	S	C	†
Killdeer	Charadrius vociferus	R	C	*†
Spotted sandpiper	Actitis macularia	S	C	†
Ring-necked pheasant	Phasianus colchicus	R	U	*
Chukar	Alectoris chukar	R	U	*
Red-tailed hawk	Buteo jamaicensis	R	C	*
Swainson's hawk	Buteo swainsoni	S	FC	*
Ferruginous hawk	Buteo regalis	S	U	*
Bald eagle	Haliaeetus leucocephalus	W	FC	*
Golden eagle	Aquila chrysaetos	R	C	*
Peregrine falcon	Falco peregrinus	T	R	*
Prairie falcon	Falco mexicanus	R	FC	*
Great horned owl	Bubo virginianus	R	C	*
Mourning dove	Zenaida macroura	R	C	†
Cliff swallow	Hirundo pyrrhonota	S	C	*
Barn swallow	Hirundo rustica	S	C	†
American crow	Corvus brachyrhynchos	T	U	*
Common raven	Corvus corax	R	C	*†
Black-billed magpie	Pica pica	R	C	†
Rock wren	Salpinctes obsoletus	T	U	†
American robin	Turdus migratorius	R	C	*
European starling	Sturnus vulgaris	R	C	†
Brewer's blackbird	Euphagus cyanocephalus	R	C	*
Red-winged blackbird	Agelaius phoeniceus	S	C	*†
Western meadowlark	Sturnella neglecta	R	C	*†
Sage sparrow	Amphispiza belli	T	U	*
House finch	Carpodacus mexicanus	R	C	*
American goldfinch	Carduelis tristis	T	U	*
House sparrow	Passer domesticus	R	C	*†
Mountain bluebird	Sialia currucoides	S	U	*
Northern flicker	Colaptes auratus	A	C	*

**Table 3: Birds That Occur on LMTA**

Notes for Table 3:

Status

A = All year

S = Summer

W = Winter

T = Transitory

Abundance

C = Common - observed anytime

FC = Fairly common - observed most of the time

U = Uncommon - observed infrequently

R = Rare - observed rarely

References for Table 3:

\* Utah State University, 1992, *Natural Resource Management Plan for the Hill Air Force Range, Wendover Air Force Range and Little Mountain Test Facility, Utah*

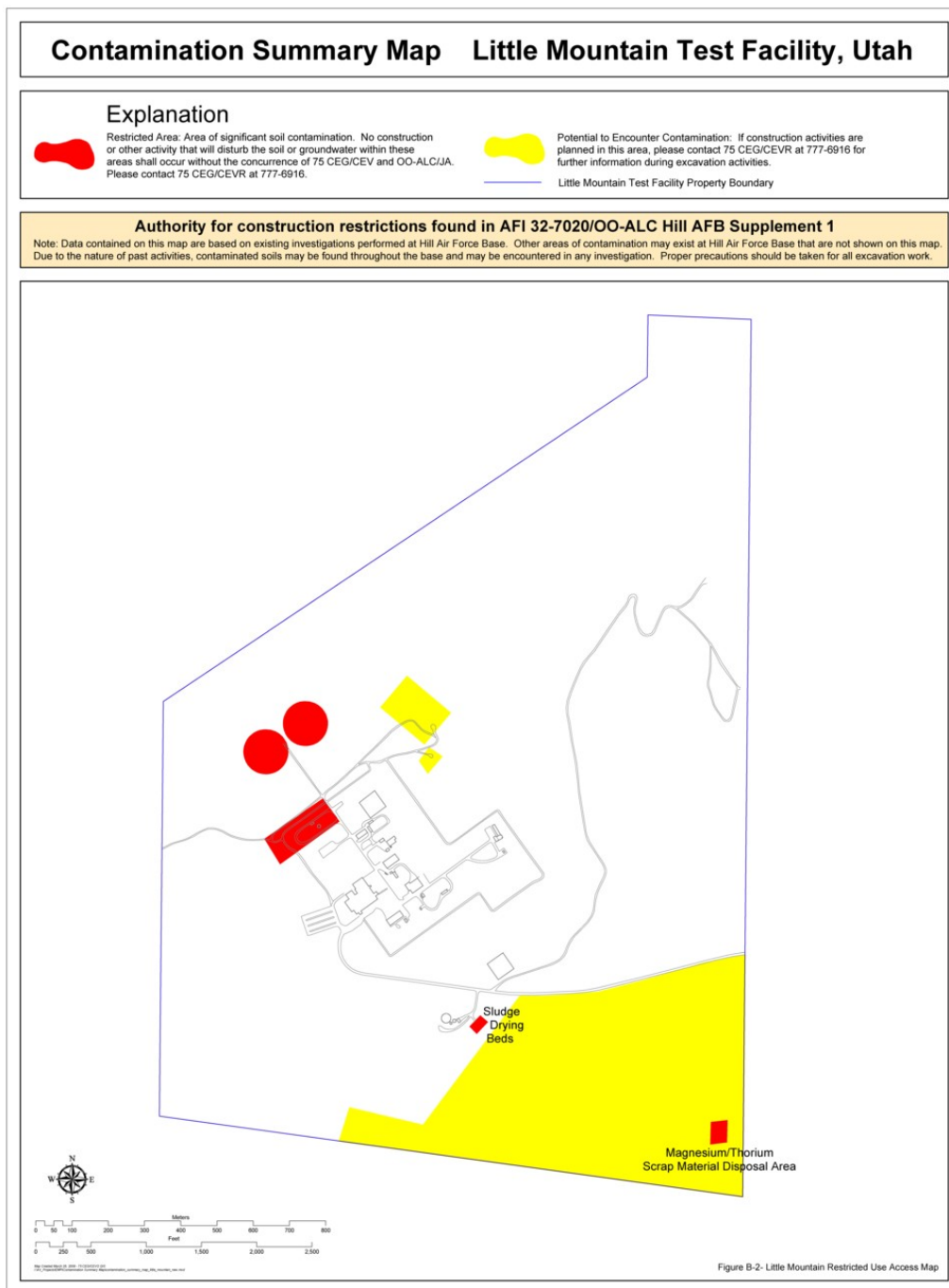
‡ Stackhouse, Mark, 1997, *Wetlands Linkage to Interstate Commerce at the Utah Test and Training Range and the Little Mountain Testing Facility, Utah*

The natural sagebrush habitats at LMTA have been reduced to a community of grasses, forbs, and invasive species due to numerous fire events. The natural resources program at Hill AFB has created models to measure components that indicate the health of the habitat at specific locations. The components that are measured include: the health of a range (range health index, or RHI), the ability of a habitat to support wildlife (wildlife community index, or WCI), and the encroachment of invasive species (floristic quality index, or FQI). Site surveys quantify the health of a range by producing calculated indices ranging from 0.01 to 1.00 with 1.00 being the optimal level at which a habitat can function. For the RHI scale, 0.80 and higher is considered pristine, and below 0.30 is considered highly degraded. The overall RHI for the LMTA is 0.48, the overall WCI is 0.47, and the overall FQI is 0.28.

#### 3.3.4 Water Quality

At LMTA, runoff is allowed to infiltrate into the ground through overland flow or surface ditches, discharging to large unoccupied areas. No surface water bodies are present within the area occupied by the existing security facilities or the area proposed for constructing the security facilities.

Contaminated shallow groundwater may be present in the southeastern portion of LMTA (see Figure 4).



Note: Areas shaded in yellow have potential for contaminated shallow groundwater

**Figure 4: Known and Potentially Contaminated Areas, LMTA**



### **3.4 Description of Relevant Pre-Existing Environmental Factors**

The Utah Geological Survey (UGS 1994a, UGS 1994b, UGS 2009) has assessed earthquake hazards for Weber County, Utah. The Weber County maps reveal faults along the western edge of the Wasatch Mountains, approximately 15 miles east of LMTA. Ground shaking potential at LMTA is categorized as high risk, in a zone where structures should be designed and constructed with a high degree of earthquake resistance. Liquefaction potential at LMTA is depicted as high. LMTA is outside of known landslide risk zones.

During scoping discussions and subsequent analysis, no other pre-existing environmental factors (e.g., hurricanes, tornados, floods, droughts) were identified for the proposed action.

### **3.5 Description of Areas Related to Cumulative Effects**

For air quality, the area related to cumulative effects would include LMTA, Hill AFB, Davis County, and Weber County.

For solid and hazardous wastes, the area related to cumulative effects would include LMTA.

For biological resources, the area related to cumulative effects would include LMTA and the surrounding non-Air Force lands (1,250 total acres).

For water quality, the area related to cumulative effects would include LMTA.

## 4.0 ENVIRONMENTAL CONSEQUENCES

### 4.1 Introduction

This section discusses effects to the resources that were identified for detailed analysis in Section 1.7.2, and for which existing conditions were presented in Section 3.3. For each of these resources, the following analyses are presented:

- direct, indirect, and cumulative effects of the no action alternative; and
- direct, indirect, and cumulative effects of the proposed action (Alternative B).

### 4.2 Predicted Effects to Relevant Affected Resources of All Alternatives

#### 4.2.1 Predicted Effects to Air Quality

##### 4.2.1.1 Alternative A: No Action

The no action alternative would have no direct effects, no indirect effects, and no cumulative effects.

##### 4.2.1.2 Alternative B (Proposed Action): Construct Security Facilities

#### Direct Effects Due to Construction

- **Fugitive Dust:** Fugitive emissions from construction activities would be controlled according to UAC Section R307-205, *Emission Standards: Fugitive Emissions and Fugitive Dust* and the Hill AFB *Fugitive Dust Plan*. Good housekeeping practices would be used to maintain construction opacity at less than 20 percent. Haul roads would be kept wet. Any soil that is deposited on nearby paved roads by construction vehicles would be removed from the roads and either returned to the site or placed in an appropriate on-base disposal facility.
- **Heavy Equipment:** The internal combustion engines of heavy equipment would generate emissions of VOCs, CO, NO<sub>x</sub>, PM-10, PM-2.5, HAPs and oxides of sulfur (SO<sub>x</sub>). Assumptions and estimated emissions for the construction period are listed in Table 4.

Data Assumptions							
Equipment Type	Diesel Emission Factor (lbs/hr)						
	VOC (HC)	CO	NOx	PM10	HAPs	SOx	
Asphalt Paver	0.28	1.24	2.96	0.24	0.05	0.25	
Bobcat Loader	0.14	0.67	1.00	0.10	0.01	0.08	
Cable Plow	0.59	3.75	4.49	0.59	0.08	0.38	
Compressor (boring)	0.25	1.62	1.94	0.25	0.04	0.16	
Concrete Truck	0.80	3.55	8.50	0.69	0.15	0.72	
Crane	2.14	6.96	17.08	2.39	0.33	1.54	
Dump Truck	0.63	2.04	6.98	0.58	0.16	0.65	
Flat Bed Truck	0.48	1.54	5.29	0.44	0.12	0.49	
Fork Lift	0.42	2.47	1.98	0.40	0.05	0.23	
Generator	0.02	0.10	0.12	0.02	0.00	0.01	
Loader/Backhoe	0.87	4.12	6.12	0.64	0.06	0.52	
Motored Grader	0.83	2.01	5.08	0.53	0.06	0.46	
Scraper	0.33	2.31	4.03	0.58	0.13	0.42	
Track Hoe	0.91	6.65	13.75	1.84	0.26	1.19	
Vibratory Compactor	0.38	1.44	4.31	0.36	0.09	0.46	
Water Truck	1.10	3.58	12.28	1.02	0.28	1.14	
Wheeled Dozer	0.46	1.48	5.08	0.35	0.08	0.49	
Note: VOCs = Hydrocarbons and HAPs = Aldehydes							
Source: Industry Horsepower Ratings and EPA 460/3-91-02							
Construct LMTA Security Facilities							
EQUIPMENT TYPE	HOURS OF OPERATION	Diesel Emissions (lbs)					
		VOC	CO	NOx	PM10	HAPs	SOx
Asphalt Paver	228	63.8	282.7	674.9	54.7	11.4	57.0
Bobcat Loader	640	89.6	428.8	640.0	64.0	6.4	51.2
Cable Plow	0	0.0	0.0	0.0	0.0	0.0	0.0
Compressor (boring)	160	40.0	259.2	310.4	40.0	6.4	25.6
Concrete Truck	80	64.0	284.0	680.0	55.2	12.0	57.6
Crane	60	128.4	417.6	1024.8	143.4	19.8	92.4
Dump Truck	440	277.2	897.6	3071.2	255.2	70.4	286.0
Flat Bed Truck	1360	652.8	2094.4	7194.4	598.4	163.2	666.4
Fork Lift	240	100.8	592.8	475.2	96.0	12.0	55.2
Generator	640	12.8	64.0	76.8	12.8	0.0	6.4
Loader/Backhoe	400	348.0	1648.0	2448.0	256.0	24.0	208.0
Motored Grader	280	232.4	562.8	1422.4	148.4	16.8	128.8
Scraper	280	92.4	646.8	1128.4	162.4	36.4	117.6
Track Hoe	300	273.0	1995.0	4125.0	552.0	78.0	357.0
Vibratory Compactor	360	136.8	518.4	1551.6	129.6	32.4	165.6
Water Truck	800	880.0	2864.0	9824.0	816.0	224.0	912.0
Wheeled Dozer	240	110.4	355.2	1219.2	84.0	19.2	117.6
TOTAL ESTIMATED EMISSIONS (lbs)		3502.4	13911.3	35866.3	3468.1	732.4	3304.4
TOTAL ESTIMATED EMISSIONS (tons)		1.75	6.96	17.93	1.73	0.37	1.65

Source of Hours: Robert Anderson, P.E., Hill AFB Engineering

**Table 4: Calculated Heavy Equipment Emissions**

Direct Effects Due to Operations

Based on information received during the scoping meeting held on January 14, 2009 and subsequent discussions with the proponent, the only air emissions due to operating the proposed action would be related to one emergency generator and one heater, both powered by diesel fuel. Assumptions and estimated emissions for the operational period are listed in Table 5.

Data Assumptions						
Equipment Type	Diesel Emission Factor (pounds/1,000 gallons)					
	VOC	CO	NOx	PM10	HAPs	SOx
Emergency Generator (Internal Combustion)	38	102	469	34	2.1	7.1
Heater - Blower Motor (Internal Combustion)	38	102	469	34	2.1	7.1
Heater - Burner (External Combustion)	1.3	5	20	2	0.4	7.1
Annual Fuel Consumption						
Equipment Type	Hours		Gallons/Hour		Gallons	
Emergency Generator (Internal Combustion)	40		10		400	
Heater - Blower Motor (Internal Combustion)	600		0.1		60	
Heater - Burner (External Combustion)	600		3		1800	
Operate LMTA Security Facilities						
Equipment Type	Annual Emissions					
	VOC	CO	NOx	PM10	HAPs	SOx
Emergency Generator (Internal Combustion)	15	41	188	14	1	3
Heater - Blower Motor (Internal Combustion)	2	6	28	2	0	0
Heater - Burner (External Combustion)	2	9	36	4	1	13
TOTAL ESTIMATED EMISSIONS (pounds/year)	20	56	252	19	2	16
TOTAL ESTIMATED EMISSIONS (tons/year)	0.01	0.03	0.13	0.01	0.00	0.01

*Notes:*

Emission factors from AQMD 2009

Operating hours per year estimates from Hill AFB

Fuel consumption rates from manufacturers and other industry estimates

**Table 5: Calculated Operational Emissions**

If required, prior to operating the proposed action, Hill AFB air quality managers would submit notices of intent, seven day notifications, and modification requests to DAQ. Hill AFB would not be allowed to operate the facilities until DAQ concurs that federal and state requirements are being met. Hill AFB ensures conformity with the CAA by complying with EPA regulations, Utah's SIP, and USAF conformity guidance.

Indirect Effects

During scoping and the detailed analysis, no indirect effects related to air quality were identified for the proposed action.

Cumulative Effects

- **Construction:** Construction-related air emissions would be limited to a duration of several months. Comparing the magnitude of predicted construction-related air emissions (Table 5) to existing emissions for Hill AFB, Davis and Weber Counties (Table 2), there would not be significant cumulative effects to air quality associated with constructing the proposed action.

- **Operations:** Hill AFB air quality managers would ensure that long-term operation of the proposed action complies with the Hill AFB Title V Permit, any relevant approval orders, EPA regulations, and the Utah SIP. Any required air quality control devices would be installed and tested prior to allowing newly installed equipment to begin operating. Comparing the magnitude of predicted operational air emissions (Table 5) to existing emissions in Hill AFB, Davis and Weber Counties (Table 2), no significant cumulative effects to air quality were identified for operating the proposed action.

#### 4.2.1.3 Alternative C: Construct Security Facilities With a Smaller Fenced Enclosure

##### Direct Effects Due to Construction

Direct effects to air quality from constructing Alternative C would be the same as for the proposed action.

##### Direct Effects Due to Operations

Direct effects to air quality from operating Alternative C would be the same as for the proposed action.

##### Indirect Effects

Similar to the proposed action, no indirect air quality effects were identified for Alternative C.

##### Cumulative Effects

Similar to the proposed action, no significant cumulative air quality effects were identified for Alternative C.

#### 4.2.2 Predicted Effects to Solid and Hazardous Waste

##### 4.2.2.1 Alternative A: No Action

With respect to solid and hazardous waste, the no action alternative would have no direct effects, no indirect effects, and no cumulative effects.

##### 4.2.2.2 Alternative B (Proposed Action): Construct Security Facilities

##### Direct Effects Due to Construction

- **Waste Generation:** During the proposed construction activities, solid wastes expected to be generated would be construction debris consisting mainly of concrete, metal, and building materials. These items would be treated as uncontaminated trash and recycled when feasible. It is possible that equipment failure or a spill of fuel, lubricants, or construction-related chemicals could generate solid or hazardous wastes. In the event of a spill of regulated materials, Hill AFB environmental managers and their contractors would comply with all federal, state, and local spill reporting and cleanup requirements.

- **Waste Management:** Hill AFB personnel have specified procedures for handling construction-related solid and hazardous wastes in their engineering construction specifications. The procedures are stated in Section 01000, General Requirements, Part 1, General, Section 1.24, Environmental Protection. All solid non-hazardous waste is collected and disposed or recycled on a routine basis. Samples from suspect wastes are analyzed for hazardous vs. non-hazardous determination. The suspect waste is safely stored while analytical results are pending. Hazardous wastes are stored at sites operated in accordance with the requirements of 40 CFR 265. The regulations require the generator to characterize hazardous wastes with analyses or process knowledge. Hazardous wastes are eventually labeled, transported, treated, and disposed in accordance with federal and state regulations.
- **Excavated Soils:** There is no known soil contamination at the location of the proposed action. However, excavations could potentially encounter contaminated soil at or beneath the shallow groundwater interface. If unusual odors or soil discoloration were to be observed during any excavation or trenching necessary to complete the proposed action, the soil would be stored on plastic sheeting and the remedial manager from the Hill AFB Environmental Restoration Branch (75 CEG/CEVR) would be notified (Kyle Gorder, 801-775-2559). Any excess clean soil would either be used as fill for another on-site project or placed in the Hill AFB landfill. Any soil determined to be hazardous would be eventually labeled, transported, treated, and disposed in accordance with federal and state regulations. No soil would be taken off base without prior 75 CEG/CEVR written approval.

#### Direct Effects Due to Operations

Based on information received during the scoping meeting held on January 14, 2009, two issues related to solid and hazardous waste were identified for operating the proposed action.

- **Non-Regulated Solid Waste:** Uncontaminated office trash would be generated. Unless recycled, these non-regulated items would be disposed as uncontaminated trash. Recycling opportunities are likely to exist for aluminum, paper, and plastic items.
- **Regulated Liquid Waste:** Domestic sewage would flow to an existing sanitary sewer line.

#### Indirect Effects

During scoping and the detailed analysis, no indirect effects related to solid and hazardous waste were identified for the proposed action.

#### Cumulative Effects

Proper handling of solid and hazardous waste eliminates releases of contaminants to the environment or reduces such releases in conformity with legal limits. There would be no significant cumulative solid or hazardous waste effects associated with the proposed action.

#### 4.2.2.3 Alternative C: Construct Security Facilities With a Smaller Fenced Enclosure

##### Direct Effects Due to Construction

Direct effects to solid and hazardous waste from constructing Alternative C would be the same as for the proposed action.

##### Direct Effects Due to Operations

Direct effects to solid and hazardous waste from operating Alternative C would be the same as for the proposed action.

##### Indirect Effects

Similar to the proposed action, no indirect solid and hazardous waste effects were identified for Alternative C.

##### Cumulative Effects

Similar to the proposed action, no significant cumulative solid and hazardous waste effects were identified for Alternative C.

#### 4.2.3 Predicted Effects to Biological Resources

##### 4.2.3.1 Alternative A: No Action

With respect to biological resources, the no action alternative would result in ongoing changes to the health of habitat indices (RHI, WCI, and FQI), primarily influenced by frequency and extent of future wildfires that may burn on LMTA. The 5.6-acre entrance facility site would remain in its current, somewhat degraded condition. No new fences would be constructed. No other direct effects, indirect effects, or cumulative effects were identified for the no action alternative.

##### 4.2.3.2 Alternative B (Proposed Action): Construct Security Facilities

##### Direct Effects Due to Construction

- **Construction:** Grading and covering the entrance facility site with structures and pavements would reduce available forage for birds and mammals, and displace rodents. Eliminating these grasses and forbs would not be a significant effect due to the small size of the proposed project and the low quality of existing forage (site-specific WCI of 0.29). Recent site observations confirmed the presence of invasive species. Without mitigation, construction activities would increase the chance of introducing additional invasive species.

Installing the perimeter fence would trap the resident mule deer herd inside the enclosed 1,250-acre area, and the herd would then need to be managed.

- **Mitigation:** Mitigation for loss of habitat at the entrance facility would be accomplished by providing a functional lift to the habitat. This would be accomplished by restoration planting (of any areas not occupied by structures or pavements) that would include fire resistant plants, native grasses, and native shrubs as outlined in the Hill AFB *Integrated Natural Resources Management Plan* (Hill 2007b).

The Little Mountain mule deer herd would be split, but animals trapped within the fenced enclosure would be managed in partnership with the Utah Division of Wildlife Resources (DWR). The mule deer would be able to continue to travel to and from available and highly used habitat on both the south and north ends of LMTA. Two wildlife guzzlers (water collectors and troughs) would be installed to provide water for the herd. Managers of the Hill AFB natural resources program would develop a mule deer management plan in consultation with DWR to determine the number of mule deer that could survive within the enclosed area and not degrade the existing habitat. Based on the management plan, mule deer numbers would be held to a certain population objective. To keep mule deer near the population objective, individuals could be driven through gates on a highly localized and small scale, or could be hunted with archery equipment (by hunters with approved access) in a similar fashion as currently used on Hill AFB. The number of permits would be based on the mule deer population and would consist of permits for both bucks and does. A fire management plan would incorporate fire breaks in the form of green strips around the perimeter of LMTA, as well as strategic strips in the interior. The plan would include restoring areas that have been impacted by fires. The result would be additional forage for mule deer and other wildlife at LMTA. An existing golden eagle nest would be avoided; the perimeter fence would be offset by 300 feet from the nest.

#### Direct Effects Due to Operations

Operating the entrance facility would discourage nesting and foraging activities by birds. In addition, operations would discourage small mammals from establishing residency at this site.

#### Indirect Effects

During scoping and the detailed analysis, no indirect effects related to biological resources were identified for the proposed action.

#### Cumulative Effects

Past fires at LMTA have degraded the habitat from a native shrub dominated community to a grass and forb plant community with invasive species. Long-term existence of the entrance facility would prevent succession of this 5.6-acre area to a native state. Due to the small size of the proposed entrance facility, already degraded biological indices, and the management strategies related to mule deer and fires, no significant cumulative effects to biological resources were identified for the proposed action.



#### 4.2.3.3 Alternative C: Construct Security Facilities With a Smaller Fenced Enclosure

##### Direct Effects Due to Construction

- **Construction:** Most of the direct effects from constructing Alternative C would be the same as for the proposed action. One important difference would be due to the size and shape of the fenced enclosure. All non-developed areas of LMTA are utilized by the resident mule deer population during all seasons of the year. Installing the security fence in the Alternative C configuration would prevent the resident mule deer herd from traveling to and from their high use areas, thus reducing available habitat to the mule deer population, especially south of the access road and the LMTA inner compound.
- **Mitigation:** Mitigation for Alternative C would be difficult to implement since the mule deer herd would be excluded from a highly used habitat described above.

##### Direct Effects Due to Operations

Direct effects from operating Alternative C would be the same as for the proposed action.

##### Indirect Effects

During scoping and the detailed analysis, no indirect effects related to biological resources were identified for Alternative C.

##### Cumulative Effects

Preventing the resident mule deer herd from occupying the habitat described above would likely reduce the population of mule deer in this area of Weber County based on habitat constraints. Mule deer are a Utah SOC, linked to an at-risk habitat and are on the decline in much of their current range. No other cumulative effects to biological resources were identified for Alternative C.

#### 4.2.4 Predicted Effects to Water Quality

##### 4.2.4.1 Alternative A: No Action

With respect to water quality, the no action alternative would have no direct effects, no indirect effects, and no cumulative effects.

##### 4.2.4.2 Alternative B (Proposed Action): Construct Security Facilities

##### Direct Effects Due to Construction

Based on information provided by Hill AFB engineers, the land area to be disturbed by the proposed entrance facility would be approximately 5.6 acres in size. The proposed action would therefore be covered under Utah's general construction permit rule for stormwater compliance. Prior to initiating any construction activities, this permit must be obtained and erosion and

sediment controls must be installed according to a stormwater pollution prevention plan (SWPPP). The SWPPP would specify measures to prevent soil from leaving the construction site on the wheels of construction vehicles, thereby controlling the addition of sediments to local drainages. The proponents would coordinate with the Hill AFB water quality manager (75CEV/CEGOC) prior to submitting an application for a Utah construction stormwater permit.

The SWPPP and Hill AFB construction specifications would require the contractor to restore the land to a non-erosive condition. All areas disturbed by excavation would be backfilled, and then either be covered by pavements, gravel, or re-planted, re-seeded, or sodded to prevent soil erosion.

Since the proposed action would convert 5.6 acres currently occupied by open land to impermeable surfaces, increased stormwater runoff volume would be expected unless runoff controls were to be created during construction of the facility. EISA Section 438 specifies storm water runoff requirements for federal development projects. The sponsor of any development or redevelopment project involving a federal facility with a footprint that exceeds 5,000 square feet must use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow. Compliance with this requirement (by designing and constructing detention and/or retention structures) would eliminate downstream effects due to creating impermeable surfaces.

The gate house would be placed on an existing asphalt surface. No effects to water quality were identified for the gate house.

The perimeter fence would not be expected to affect water quality.

Contamination of shallow groundwater may exist beneath portions of the proposed perimeter fence, and beneath the utility poles that would serve the entrance facility. If groundwater or saturated soils were to be contacted by auger crews within the areas shown in yellow shading on Figure 4, activities would be halted and the remedial manager from the Hill AFB Environmental Restoration Branch (75 CEG/CEVR) would be notified (Kyle Gorder, 801-775-2559). In such an event, all applicable requirements would be met in all subsequent activities.

#### *Direct Effects Due to Operations*

The proposed facility would be subject to Utah's general multi-sector permit rule for stormwater compliance. The *Hill AFB Stormwater Management Plan - Municipal Stormwater Permit* establishes good housekeeping measures and other best management practices to prevent contamination of runoff.

#### *Indirect Effects*

During scoping and the detailed analysis, no indirect effects related to water quality were identified for the proposed action.

### Cumulative Effects

On-base and off-base water quality would be protected during and after construction activities. There are no significant cumulative water quality effects associated with the proposed action.

#### 4.2.4.3 Alternative C: Construct Security Facilities With a Smaller Fenced Enclosure

### Direct Effects Due to Construction

Direct effects to water quality from constructing Alternative C would be the same as for the proposed action.

### Direct Effects Due to Operations

Direct effects to water quality from operating Alternative C would be the same as for the proposed action.

### Indirect Effects

Similar to the proposed action, no indirect water quality effects were identified for Alternative C.

### Cumulative Effects

Similar to the proposed action, no significant cumulative water quality effects were identified for Alternative C.

## **4.3 Summary Comparison of Predicted Environmental Effects**

Issue	Alternative A No Action	Alternative B Proposed Action	Alternative C Construct Security Facilities With a Smaller Fenced Enclosure
Air Quality	No effects	Construction equipment would create temporary emissions. Fugitive dust emissions would be mitigated.  Air emissions from an emergency generator and an outdoor heater would produce 0.13 tons per year or less of each criteria pollutant, or of hazardous air pollutants as a group.	Construction equipment would create temporary emissions. Fugitive dust emissions would be mitigated.  Air emissions from an emergency generator and an outdoor heater would produce 0.13 tons per year or less of each criteria pollutant, or of hazardous air pollutants as a group.

Solid and Hazardous Waste	No effects	If contaminated soils are identified, they would be properly handled during the construction process. Operational activities would generate uncontaminated trash and domestic sewage. Solid and liquid wastes would all be properly contained, stored, transported, disposed, re-used, and/or recycled. Wastewater would flow to an existing sanitary sewer line.	If contaminated soils are identified, they would be properly handled during the construction process. Operational activities would generate uncontaminated trash and domestic sewage. Solid and liquid wastes would all be properly contained, stored, transported, disposed, re-used, and/or recycled. Wastewater would flow to an existing sanitary sewer line.
Biological Resources	No effects	LMTA habitat has been previously degraded by human activities and by fires. The proposed entrance facility would reduce available forage for birds and mammals, and displace rodents. Without mitigation, construction activities would increase the chance of introducing additional invasive species. Restoration planting (of any areas not occupied by structures or pavements) would include fire resistant plants, native grasses, and native shrubs. The resident mule deer herd would be managed and its population maintained at acceptable levels for the available forage. A fire management plan would improve existing habitat.	LMTA habitat has been previously degraded by human activities and by fires. The proposed entrance facility would reduce available forage for birds and mammals, and displace rodents. Without mitigation, construction activities would increase the chance of introducing additional invasive species. Restoration planting (of any areas not occupied by structures or pavements) would include fire resistant plants, native grasses, and native shrubs. Migration corridors for the resident mule deer herd would be blocked, thus eliminating important habitat areas frequented by the deer, which would likely reduce the population of mule deer in this area of Weber County based on habitat constraints. A fire management plan would improve existing habitat.
Water Quality	No effects	During construction and operations, water quality would be protected by implementing stormwater management practices. Predevelopment hydrologic characteristics would be preserved. Contaminated shallow groundwater may exist beneath portions of the proposed perimeter fence. If groundwater or saturated soils were to be contacted in the relevant areas, activities would be halted and Hill AFB remedial managers would be contacted.	During construction and operations, water quality would be protected by implementing stormwater management practices. Predevelopment hydrologic characteristics would be preserved. Contaminated shallow groundwater may exist beneath portions of the proposed fence. If groundwater or saturated soils were to be contacted in the relevant areas, activities would be halted and Hill AFB remedial managers would be contacted.

**Table 6: Summary Comparison of Predicted Environmental Effects**

## **5.0 LIST OF PREPARERS**

### Streamline Consulting, LLC

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(801) 451-7872

Randal B. Klein, P.E., Project Manager

### Civil Engineer Group, Environmental Management Division, 75 CEG/CEV

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Kay Winn, NEPA Manager, (801) 777-0383

### Select Engineering Services

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Rudy Jones, Biologist, (801) 399-1858

### EMAssist, Inc.

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Mark Kaschmitter, Air Regulatory Analysis, (801) 775-2359

### CH2M HILL, Inc.

7274 Wardleigh Road, Hill AFB UT 84056

Michelle York, P.E., Air Quality Engineer, (801) 775-6961

## **6.0 LIST OF PERSONS AND AGENCIES CONSULTED**

### Civil Engineer Group, Environmental Management Division, 75 CEG/CEV

7274 Wardleigh Road, Hill AFB UT 84056

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Jaynie Hirschi, Archaeologist, (801) 775-6920

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Robert Anderson, Project Manager, 75 CEG/CEP, (801) 586-8469

### 75th Air Base Wing, 75 ABW/AT

Hill AFB UT 84056

Bob Swan, Antiterrorism Officer, (801) 775-5313

## 7.0 REFERENCES

**AQMD 2009:** *Annual Emissions Reporting Tool*, Air Quality Management District, South Coast (California), current on website as of March, 2009.

**CFR:** *Code of Federal Regulations*, US Government Printing Office, Office of the Federal Register (various sections and dates).

**DAQ 2007:** *“Utah’s Area Designation Recommendation for the 2006 PM<sub>2.5</sub> NAAQS”*, Utah Division of Air Quality, December, 2007.

**DAQ 2009a:** *State of Utah National Ambient Air Quality Standards, Areas of Non-Attainment and Maintenance (Updated July 2006)*, Utah Division of Air Quality Website, February, 2009.

**DAQ 2009b:** *Division of Air Quality Annual Report for 2008*, Utah Division of Air Quality, January, 2009.

**EPA 1991:** *Nonroad Engine and Vehicle Emission Study - Report*, Table 2-07a, US Environmental Protection Agency, 1991.

**EPA 1998:** *National Air Pollutant Emission Trends, Procedures Document for 1900-1996*, US Environmental Protection Agency, Page 4-285, 1996.

**Hill AFB:** *Construction Specifications, Section 01000, General Requirements, Part 1, General, Section 1.24, Environmental Protection*, Hill AFB, UT, current version.

**Hill 2007a:** *Integrated Cultural Resources Management Plan*, Hill AFB, 2007.

**Hill 2007b:** *Integrated Natural Resources Management Plan*, Hill AFB, 2007.

**Hill 2009:** *2007 Annual Criteria and Toxic Pollutant Emission Inventory*, Hill AFB, provided by CH2M HILL, February, 2009.

**UGS 1994a:** *Earthquake Ground Shaking in Utah*, Utah Geological Survey, 1994.

**UGS 1994b:** *Liquefaction Potential for a Part of Weber County, Utah*, Utah Geological Survey, 1994.

**UGS 2009:** *Earthquake Fault Map of a Portion of Weber County, Utah*, Utah Geological Survey, current on website as of March, 2009.

## APPENDIX A

### CULTURAL RESOURCES FINDING OF NO ADVERSE EFFECT





DEPARTMENT OF THE AIR FORCE  
75TH CIVIL ENGINEER GROUP (AFMC)  
HILL AIR FORCE BASE UTAH

24 March 2009

Dr. W. Robert James  
Chief, Environmental Management Division  
75th CEG/CEV  
7274 Wardleigh Road  
Hill Air Force Base, Utah 84056-5137

Ms. Lori Hunsaker  
State Historic Preservation Officer  
300 Rio Grande  
Salt Lake City, Utah 84101

Dear Ms. Hunsaker

Hill Air Force Base (AFB) is currently proposing to upgrade facilities at the Little Mountain Test Annex (LMTA) in Weber County, Utah. Upgrades include construction of a new entry control facility, a new gatehouse, and a new perimeter fence. These upgrades are needed to provide entry control facilities and to protect LMTA from any unauthorized access. The Area of Potential Effect (APE) is approximately 38 acres of property (Attachment 1, Area of Potential Effects for the Proposed Little Mountain Test Annex Facility Upgrades).

Within LMTA, four previous inventories have comprised cultural resources survey of 848 acres (U-91-WC-687m, U-940HL-0022m, U-00-HL-0743m, and U-01-HL-0558m). No historic properties were identified. The current APE falls within these previously inventoried areas.

Construction will encompass the entire APE of the current project. Given the lack of previous findings, the potential for archaeological historic properties is extremely low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2, Unanticipated Discovery of Archaeological Deposits).

Therefore, Hill AFB has determined the proposed project will have no adverse effect to historic properties [36 CFR §800.4(d)(1)]. I request your concurrence in these determinations as specified in 36 CFR §800.

An Environmental Assessment has been prepared for the proposed Security Forces Facility. If you would like a copy of this document to review, or should you or your staff have any questions about the project, please contact our archaeologist, Ms. Jaynie Hirschi, 75th CEG/CEVOR, at (801) 775-6920 or at [jaynie.hirschi@hill.af.mil](mailto:jaynie.hirschi@hill.af.mil).

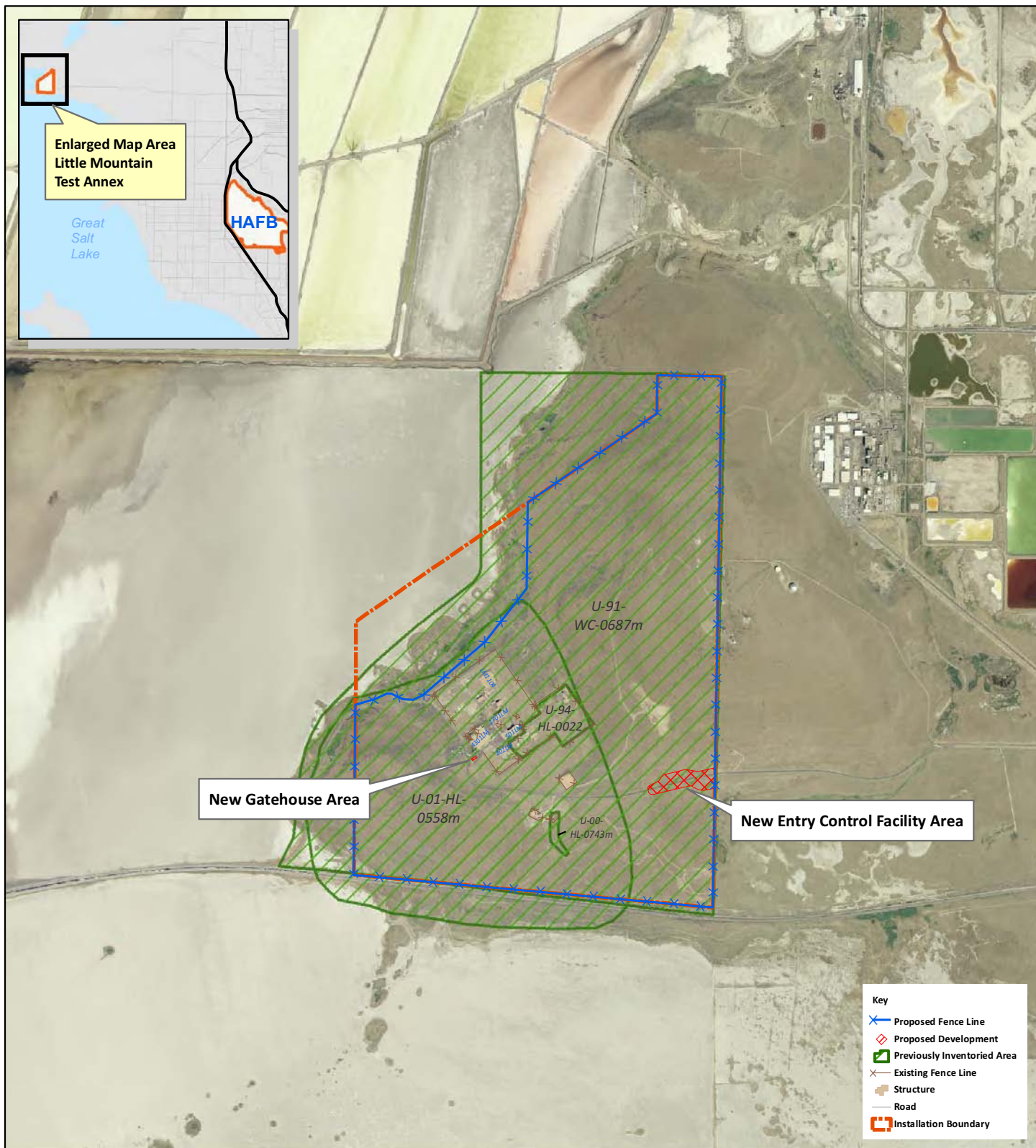
Sincerely



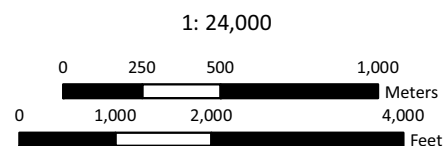
W. ROBERT JAMES, Ph.D., P.E.  
Chief, Environmental Management Division  
75th Civil Engineer Group

Attachments:

1. Area of Potential Effects for the Proposed Little Mountain Test Annex Facility Upgrades
2. Unanticipated Discovery of Archaeological Deposits



Area of Potential Effects for the  
Proposed Little Mountain Test Annex Facility Upgrades  
Hill Air Force Base, Utah





# *Standard Operating Procedure*

## **UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS**

### **APPLICABLE LAWS AND REGULATIONS**

- ◆ National Historic Preservation Act
- ◆ National Environmental Policy Act
- ◆ Native American Graves Protection and Repatriation Act
- ◆ AFI 32-7065 (June 2004), *Cultural Resources Management Program*

### **OVERVIEW**

All undertakings that disturb the ground surface have the potential to discover buried and previously unknown archaeological deposits. The accidental discoveries of archaeological deposits during an undertaking can include but are not limited to:

- ◆ Undiscovered/undocumented structural and engineering features; and
- ◆ Undiscovered/undocumented archaeological resources such as foundation remains, burials, artifacts, or other evidence of human occupation.

### **POLICY**

When cultural resources are discovered during the construction of any undertaking or ground-disturbing activities, Hill AFB shall:

- ◆ Evaluate such deposits for NRHP eligibility.
- ◆ Treat the site as potentially eligible and avoid the site insofar as possible until an NRHP eligibility determination is made.
- ◆ Make reasonable efforts to minimize harm to the property until the Section 106 process is completed.
- ◆ **The BHPO will ensure that the provisions of NAGPRA are implemented first if any unanticipated discovery includes human remains, funerary objects, or American Indian sacred objects (see SOP #6).**

### **PROCEDURE**

Step 1: Work shall cease in the area of the discovery (Figure 5-5). Work may continue in other areas.

- ◆ The property is to be treated as eligible and avoided until an eligibility determination is made. Hill AFB will continue to make reasonable efforts to avoid or minimize harm to

Further construction activities in the vicinity of the site will be suspended until an agreed-upon testing strategy has been carried out and sufficient data have been gathered to allow a determination of eligibility. The size of the area in which work should be stopped shall be determined in consultation with the **BHPO**.

the property until the Section 106 process is completed.

Step 2: Immediately following the discovery, the **Project Manager** shall notify the installation **BHPO**.

Step 3: The **BHPO** or a professional archaeologist shall make a field evaluation of the context of the deposit and its probable age and significance, record the findings in writing, and document with appropriate photographs and drawings.

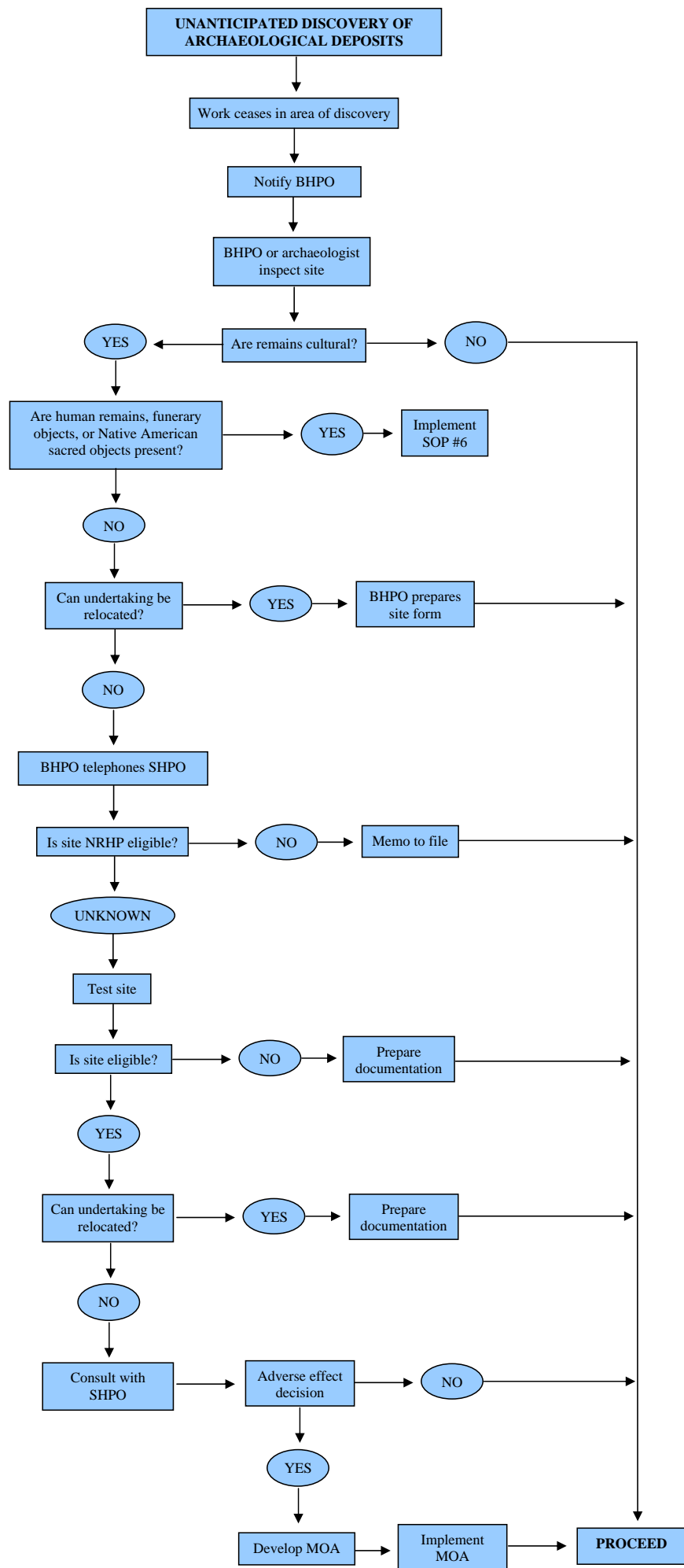
- ◆ If disturbance of the deposits is minimal and the excavation can be relocated to avoid the site, the **BHPO** will file appropriate site forms in a routine manner.
- ◆ If the excavation cannot be relocated, the **BHPO** shall notify the office of the **SHPO** to report the discovery and to initiate an expedited consultation.

*The Section 106 review process is initiated at this point.*

- ◆ If the deposits are determined to be ineligible for inclusion in the NRHP, then Hill AFB **BHPO** will prepare a memorandum for record and the construction may proceed.
- ◆ If the existing information is inadequate for an NRHP eligibility determination, Hill AFB **BHPO** shall develop an emergency testing plan in coordination with the SHPO.

Step 4: Hill AFB shall have qualified personnel conduct test excavations of the deposits to determine NRHP eligibility.

- ◆ Hill AFB BHPO, in consultation with the SHPO, will determine appropriate methodology for NRHP eligibility determination.
- ◆ If the SHPO and Hill AFB agree that the deposits are ineligible for inclusion in the NRHP, then work on the undertaking may proceed.
- ◆ If the deposits appear to be eligible, or Hill AFB and the SHPO cannot agree on the question of eligibility, then Hill AFB shall implement alternative actions, depending on the urgency of the proposed action.
  - Hill AFB may relocate the project to avoid the adverse effect.
  - Hill AFB may request the Keeper of the National Register to provide a determination.
  - Hill AFB may proceed with a data recovery plan under a MOA developed in coordination with the SHPO and possibly the ACHP and interested parties.
  - **Hill AFB may request comments from the ACHP and may develop and implement actions that take into account the effects of the undertaking on the property to the extent feasible and the comments of the SHPO, ACHP, and interested parties. Interim comments must be provided to Hill AFB within 48 hours; final comments must be provided within 30 days.**



APPENDIX B

RESPONSES FROM AMERICAN INDIAN TRIBES



DEPARTMENT OF THE AIR FORCE  
75TH CIVIL ENGINEER GROUP (AFMC)  
HILL AIR FORCE BASE UTAH

2 April 2009

Dr. W. Robert James  
Chief, Environmental Management Division  
75th CEG/CEV  
7274 Wardleigh Road  
Hill Air Force Base, Utah 84056-5137

Rupert Steele, Chairman  
Confederated Tribes of the Goshute Indian Reservation  
PO Box 6104  
Ibapah, UT 84034

Dear Chairman Steele

Hill Air Force Base (AFB) is currently proposing to upgrade facilities at the Little Mountain Test Annex (LMTA) in Weber County, Utah. Upgrades include construction of a new entry control facility, a new gatehouse, and a new perimeter fence. These upgrades are needed to provide entry control facilities and to protect LMTA from any unauthorized access. The Area of Potential Effect (APE) is approximately 38 acres of property (Attachment 1, Area of Potential Effects for the Proposed Little Mountain Test Annex Facility Upgrades).

Within LMTA, four previous inventories have comprised cultural resources survey of 848 acres (U-91-WC-687m, U-94-HL-0022m, U-00-HL-0743m, and U-01-HL-0558m). No historic properties were identified. The current APE falls within these previously inventoried areas.

Construction will encompass the entire APE of the current project. Given the lack of previous findings, the potential for archaeological historic properties is extremely low; however, if any archaeological resources are found during construction, ground-disturbing activities in the immediate vicinity will cease, the Hill AFB Cultural Resources Program will be notified, and the unanticipated discovery of archaeological deposits procedures shall be implemented with direction from the Hill AFB Cultural Resources Program and in accordance with the Hill AFB Integrated Cultural Resources Management Plan (Attachment 2, Unanticipated Discovery of Archaeological Deposits).

Hill AFB has determined the proposed project will have no adverse effect to historic properties [36 CFR §800.4(d)(1)].



An Environmental Assessment has been prepared for the proposed LMTA facility upgrades. If you would like a copy of this document to review, or should you or your staff have any questions about the project, please contact our archaeologist, Ms. Jaynie Hirschi, 75th CEG/CEVOR, at (801) 775-6920 or at [jaynie.hirschi@hill.af.mil](mailto:jaynie.hirschi@hill.af.mil).

Sincerely

A handwritten signature in dark ink, appearing to read "W. Robert James", is positioned above the printed name.

W. ROBERT JAMES, Ph.D., P.E.  
Chief, Environmental Management Division  
75th Civil Engineer Group

Attachments:

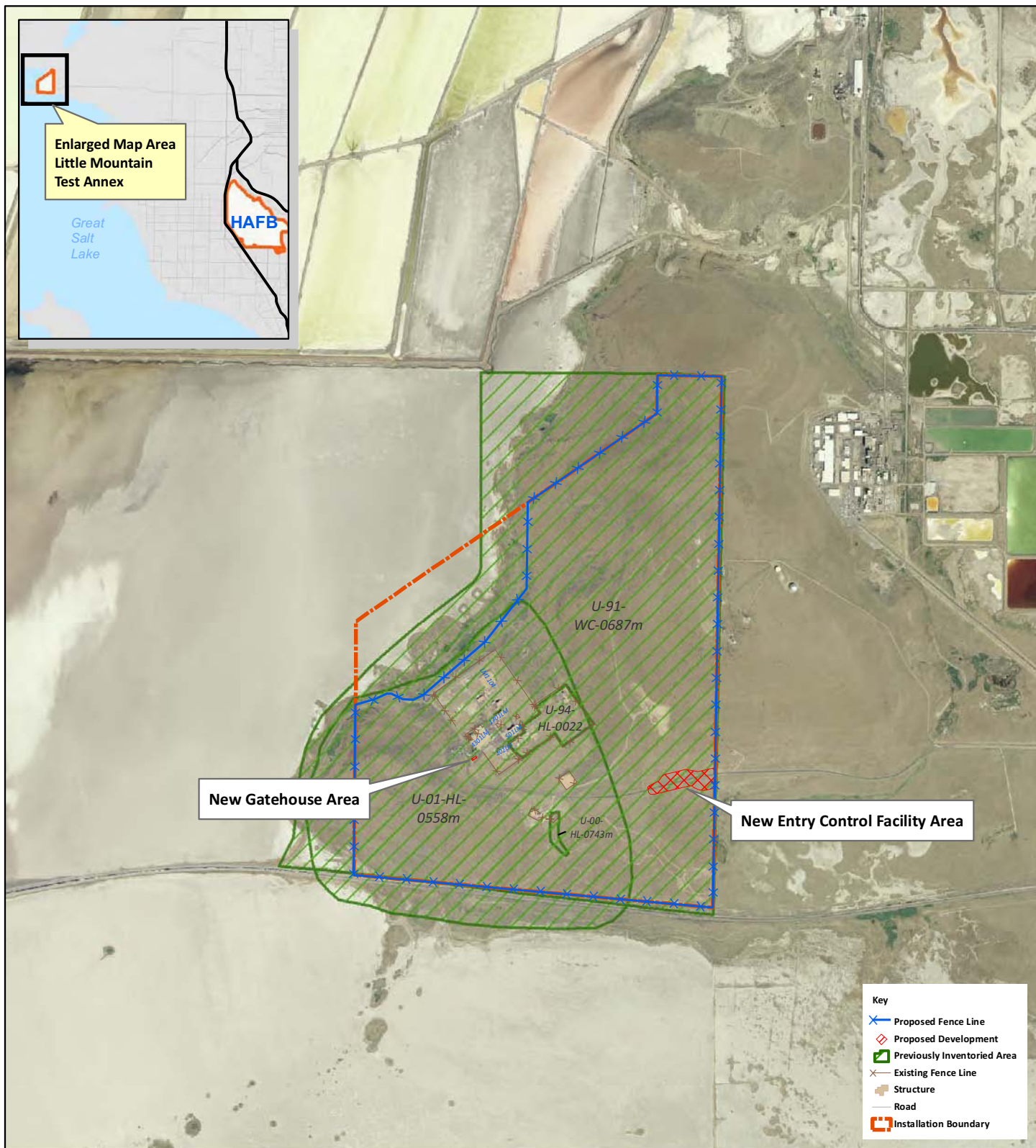
1. Area of Potential Effects for the Proposed Little Mountain Test Annex Facility Upgrades
2. Unanticipated Discovery of Archaeological Deposits

cc:

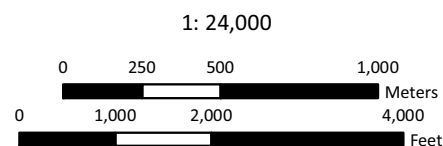
Ed Naranjo, Vice-Chairman, Confederated Tribes of the Goshute Indian Reservation  
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Area of Potential Effects for the  
Proposed Little Mountain Test Annex Facility Upgrades  
Hill Air Force Base, Utah



# *Standard Operating Procedure*

## **UNANTICIPATED DISCOVERY OF ARCHAEOLOGICAL DEPOSITS**

### **APPLICABLE LAWS AND REGULATIONS**

- ◆ National Historic Preservation Act
- ◆ National Environmental Policy Act
- ◆ Native American Graves Protection and Repatriation Act
- ◆ AFI 32-7065 (June 2004), *Cultural Resources Management Program*

### **OVERVIEW**

All undertakings that disturb the ground surface have the potential to discover buried and previously unknown archaeological deposits. The accidental discoveries of archaeological deposits during an undertaking can include but are not limited to:

- ◆ Undiscovered/undocumented structural and engineering features; and
- ◆ Undiscovered/undocumented archaeological resources such as foundation remains, burials, artifacts, or other evidence of human occupation.

### **POLICY**

When cultural resources are discovered during the construction of any undertaking or ground-disturbing activities, Hill AFB shall:

- ◆ Evaluate such deposits for NRHP eligibility.
- ◆ Treat the site as potentially eligible and avoid the site insofar as possible until an NRHP eligibility determination is made.
- ◆ Make reasonable efforts to minimize harm to the property until the Section 106 process is completed.
- ◆ **The BHPO will ensure that the provisions of NAGPRA are implemented first if any unanticipated discovery includes human remains, funerary objects, or American Indian sacred objects (see SOP #6).**

### **PROCEDURE**

Step 1: Work shall cease in the area of the discovery (Figure 5-5). Work may continue in other areas.

- ◆ The property is to be treated as eligible and avoided until an eligibility determination is made. Hill AFB will continue to make reasonable efforts to avoid or minimize harm to

Further construction activities in the vicinity of the site will be suspended until an agreed-upon testing strategy has been carried out and sufficient data have been gathered to allow a determination of eligibility. The size of the area in which work should be stopped shall be determined in consultation with the **BHPO**.

the property until the Section 106 process is completed.

Step 2: Immediately following the discovery, the **Project Manager** shall notify the installation **BHPO**.

Step 3: The **BHPO** or a professional archaeologist shall make a field evaluation of the context of the deposit and its probable age and significance, record the findings in writing, and document with appropriate photographs and drawings.

- ◆ If disturbance of the deposits is minimal and the excavation can be relocated to avoid the site, the **BHPO** will file appropriate site forms in a routine manner.
- ◆ If the excavation cannot be relocated, the **BHPO** shall notify the office of the **SHPO** to report the discovery and to initiate an expedited consultation.

*The Section 106 review process is initiated at this point.*

- ◆ If the deposits are determined to be ineligible for inclusion in the NRHP, then Hill AFB **BHPO** will prepare a memorandum for record and the construction may proceed.
- ◆ If the existing information is inadequate for an NRHP eligibility determination, Hill AFB **BHPO** shall develop an emergency testing plan in coordination with the SHPO.

Step 4: Hill AFB shall have qualified personnel conduct test excavations of the deposits to determine NRHP eligibility.

- ◆ Hill AFB BHPO, in consultation with the SHPO, will determine appropriate methodology for NRHP eligibility determination.
- ◆ If the SHPO and Hill AFB agree that the deposits are ineligible for inclusion in the NRHP, then work on the undertaking may proceed.
- ◆ If the deposits appear to be eligible, or Hill AFB and the SHPO cannot agree on the question of eligibility, then Hill AFB shall implement alternative actions, depending on the urgency of the proposed action.
  - Hill AFB may relocate the project to avoid the adverse effect.
  - Hill AFB may request the Keeper of the National Register to provide a determination.
  - Hill AFB may proceed with a data recovery plan under a MOA developed in coordination with the SHPO and possibly the ACHP and interested parties.
  - **Hill AFB may request comments from the ACHP and may develop and implement actions that take into account the effects of the undertaking on the property to the extent feasible and the comments of the SHPO, ACHP, and interested parties. Interim comments must be provided to Hill AFB within 48 hours; final comments must be provided within 30 days.**

